Introduction to Computer Based Systems

Course Design
2015-2016

Course Information
Division: Business
Course Number: CMP 103 (SUN# CIS 1120)
Title: Introduction to Computer Based Systems
Credits: 3
Developed by: Lydia Mata
Lecture/Lab Ratio: 3 Lecture/0 Lab

<table>
<thead>
<tr>
<th>Transfer Status</th>
<th>ASU</th>
<th>NAU</th>
<th>UA</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS 105,</td>
<td>C15</td>
<td>120</td>
<td>111</td>
</tr>
<tr>
<td>Computer/Stats</td>
<td></td>
<td>also</td>
<td></td>
</tr>
<tr>
<td>(CS)</td>
<td></td>
<td>satisfies:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Science/Applied</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Science [SAS] –or-</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>BBA 293</td>
<td></td>
</tr>
</tbody>
</table>

Activity Course: No
CIP Code: 11.0100
Assessment Mode: Pre/Post Test (75 Questions/100 Points)
Semester Taught: Fall and Spring
GE Category: AAS degree only/GE Options
Separate Lab: No
Awareness Course: No
Intensive Writing Course: No

Prerequisites
ENG 091 with a grade of “C” or higher or reading placement test score as established by District policy

Educational Value
The major purpose of this course is to provide learners with a general introduction to the field of information systems within the framework of a class that can meet the transfer requirements of most 4 year colleges/universities. The course includes hands-on content to familiarize learners with basic software and Internet skills that they can use in other classes/life situations.

Description
Uses of computer hardware and software in business and society, computer terminology, program definition and flowcharting/algorithm, introduction to programming using general purpose language and word processing, spreadsheet, database, graphics, multimedia, and Internet. Business applications focus on spreadsheet creation and formatting along with database creation and formatting.
**Supplies**
Access to an Internet-connected personal computer.

**Competencies and Performance Standards**

1. **Become computer literate.**
   
   **Learning objectives**
   
   *What you will learn as you master the competency:*
   
   a. Define the term “computer literate.”
   b. Understand how becoming computer literate makes you a savvy computer user and consumer.
   c. List how becoming computer literate helps you in a career.
   d. List how becoming computer literate helps you understand and take advantage of future technologies.
   e. Understand the challenges that computers bring to a digital society, and how becoming computer literate helps you deal with these changes.

   **Performance Standards**
   
   *Competence will be demonstrated:*
   
   o Completion of a quiz (with a passing grade) covering the learning objectives specified.

   *Criteria - Performance will be satisfactory when:*
   
   o Learner defines the term “computer literate.”
   o Learner understands becoming computer literate makes them a savvy computer user and consumer.
   o Learner lists how becoming computer literate helps them in a career.
   o Learner lists how becoming computer literate helps them understand and take advantage of future technologies.
   o Learner understands the challenges that computers bring to a digital society and how becoming computer literate helps them deal with these challenges.

2. **Describe the basic parts and functions of a computer.**
   
   **Learning objectives**
   
   *What you will learn as you master the competency:*
   
   a. Explain what the four main functions of a computer are.
   b. Differentiate between data and information.
   c. Define “bits” and “bytes” and how they are measured.
   d. Define and list input devices.
   e. Define and list output devices.
   f. List items on the front panel of the system unit.
   g. List items on the back of the system unit.
   h. Explain what is inside the system unit.
   i. List steps to set up your computer to avoid strain and injury.

   **Performance Standards**
   
   *Competence will be demonstrated:*
   
   o Completion of a quiz (with a passing grade) covering the learning objectives specified.
**Criteria - Performance will be satisfactory when:**

- Learner explains the four main functions of a computer.
- Learner differentiates between data and information.
- Learner defines “bits” and “bytes” and how they are measured.
- Learner defines and lists input devices.
- Learner defines and lists output devices.
- Learner lists items on the front panel of the system unit.
- Learner lists items on the back of the system unit.
- Learner explains what is inside the system unit.
- Learner lists steps to set up his/her computer to avoid strain and injury.

3. **Describe the Internet and the various systems and software that support its use.**

**Learning objectives**

*What you will learn as you master the competency:*

- Understand the different ways to communicate through the Internet with IM, Weblogs, podcasts, VoIP, Webcasts, wikis, e-mail, chat, newsgroups, and listservs.
- List the various kinds of multimedia files found on the Web, and what software is needed to use them.
- Define e-commerce.
- Manage online annoyances like spam, cookies, adware, spyware, malware, phishing, and Internet hoaxes.
- Define the types of Web browsers.
- Define URL and its parts.
- Use hyperlinks and other tools to navigate the Web.
- Use search engines and subject directories to search the Internet.
- Define Boolean operators and how they help search the Web more efficiently.
- Evaluate a Web site.
- Explain how data travels on the Internet.
- List options for connecting to the Internet.
- Locate an Internet Service Provider.
- Explain the origin of the Internet.
- Discuss the future of the Internet.

**Performance Standards**

*Competence will be demonstrated:*

- Completion of a quiz (with a passing grade) covering the learning objectives specified.

**Criteria - Performance will be satisfactory when:**

- Learner understands the different ways to communicate through the Internet with IM, Weblogs, podcasts, VoIP, Webcasts, wikis, e-mail, chat, newsgroups, and listservs.
- Learner lists the various kinds of multimedia files found on the Web, and what software is needed to use them.
- Learner defines e-commerce.
- Learner manages online annoyances like spam, cookies, adware, spyware, phishing, and Internet hoaxes.
Leaner defines the types of Web browsers.
Leaner defines URL and its parts.
Leaner uses hyperlinks and other tools to navigate the Web.
Leaner uses search engines and subject directories to search the Internet.
Leaner defines Boolean operators and how they help search the Web more efficiently.
Leaner evaluates a Web site.
Leaner explains how data travels on the Internet.
Leaner lists options for connecting to the Internet.
Leaner locates an Internet Service Provider.
Leaner explains the origin of the Internet.
Leaner discusses the future of the Internet.

4. **Define application software and its uses.**

**Learning objectives**

*What you will learn as you master the competency:*

a. Differentiate between application software and system software.
b. List the different kinds of application included in productivity software available for home use.
c. Identify various types of multimedia software.
d. Identify various types of entertainment software.
e. Define reference software.
f. Identify the various types of drawing software.
g. List the various kinds of software businesses like to use.
h. Find help for software problems.
i. List ways to obtain software.
j. Understand how to install, uninstall, and open software.

**Performance Standards**

*Competence will be demonstrated:*

- Completion of a quiz (with a passing grade) covering the learning objectives specified.

*Criteria - Performance will be satisfactory when:*

- Learner differentiates between application software and system software.
- Learner lists the different kinds of application included in productivity software available for home use.
- Learner identifies various types of multimedia software.
- Learner identifies the various types of entertainment software.
- Learner defines reference software.
- Learner identifies the various types of drawing software.
- Learner lists the various kinds of software businesses use.
- Learner finds help for software problems.
- Learner lists ways to obtain software.
- Learner understands how to install, uninstall, and open software.
5. **Understand the operating system, utility programs, and file management.**

   **Learning objectives**
   
   *What you will learn as you master the competency:*
   
   a. List the software included in system software.
   b. Identify the different types of operating systems.
   c. List the most common desktop operating systems.
   d. Explain how operating systems provide a means for users to interact with the computer.
   e. Explain how the operating system helps manage the processor.
   f. Explain how the operating system manages memory and storage.
   g. Explain how the operating system manages hardware and peripheral devices.
   h. Explain how the operating system interacts with application software.
   i. Explain how the operating system helps the computer start up.
   j. List the main desktop and windows features.
   k. Explain how the operating system helps keep the computer organized.
   l. Identify the utility programs included in system software, and their functions.

   **Performance Standards**
   
   *Competence will be demonstrated:*
   
   - Completion of a quiz (with a passing grade) covering the learning objectives specified.

   *Criteria - Performance will be satisfactory when:*
   
   - Learner lists the software included in the system software.
   - Learner identifies the different types of operating systems.
   - Learner lists the most common desktop operating systems.
   - Learner explains how operating systems provide a means for users to interact with the computer.
   - Learner explains how the operating system helps manage the processor.
   - Learner explains how the operating system manages memory and storage.
   - Learner explains how the operating system manages hardware and peripheral devices.
   - Learner explains how the operating system interacts with application software.
   - Learner explains how the operating system helps the computer start up.
   - Learner lists the main desktop and windows features.
   - Learner explains how the operating system helps keep the computer organized.
   - Learner identifies the utility programs included in system software, and their functions.

6. **Evaluate and assess system hardware.**

   **Learning objectives**
   
   *What you will learn as you master the competency:*
   
   a. Explain the functions of the CPU and how to evaluate its performance.
   b. Explain how memory works and how to evaluate the amount of memory needed for projects.
   c. Identify the computer’s main storage devices.
   d. Identify components that affect the output of video on a computer.
   e. Identify components that affect the computer’s sound quality.
f. Identify the different kind of ports and their uses.

**Performance Standards**

*Competence will be demonstrated:*
- Completion of a quiz (with a passing grade) covering the learning objectives specified.

*Criteria - Performance will be satisfactory when:*
- Learner explains the functions of the CPU and how to evaluate its performance.
- Learner explains how memory works and how to evaluate the amount of memory needed for projects.
- Learner identifies the computer’s main storage devices.
- Learner identifies the components that affect the output of a video on a computer.
- Learner identifies the components that affect the computer’s sound quality.
- Learner identifies the different kinds of ports and their uses.

7. **Define the components and systems required for data communications and networking.**

**Learning objectives**

*What you will learn as you master the competency:*

a. Define a network and list the advantages of setting one up.

b. Differentiate between a client/server network and a peer-to-peer network.

c. List the main components of every network.

d. List the most common home networks.

e. Define wired Ethernet networks, and explain how they are created.

f. Define wireless Ethernet networks, and explain how they are created.

g. Differentiate between power-line networks and Ethernet networks.

h. List ways that hackers attack networks, and what harm they cause.

i. Differentiate between wireless and wired networks including their securities.

j. Identify the different types of viruses.

k. List ways to protect a computer form viruses.

**Performance Standards**

*Competence will be demonstrated:*
- Completion of a quiz (with a passing grade) covering the learning objectives specified.

*Criteria - Performance will be satisfactory when:*
- Learner defines a network and lists the advantages of setting one up.
- Learner differentiates between a client/server network and a peer-to-peer network.
- Learner lists the main components of every network.
- Learner lists the most common home networks.
- Learner defines wired Ethernet networks and explains how they are created.
- Learner differentiates between power-line networks, and what harm they cause.
- Learner differentiates between wireless and wired networks including their securities.
- Learner identifies the different types of viruses.
- Learner lists ways to protect a computer from viruses.
8. Explain and use mobile computing.

**Learning objectives**

*What you will learn as you master the competency:*

a. List the advantages and limitations of mobile computing.
b. Identify the various mobile computing devices.
c. Explain how cell phone components resemble a traditional computer, and how they function.
d. Define a portable media player and list its functions.
e. Define a PDA and identify its internal components and features.
f. Understand how to synchronize a PDA with a desktop computer.
g. Define a tablet PC and its uses.
h. Differentiate between notebooks and desktop computers.

**Performance Standards**

*Competence will be demonstrated:*

- Completion of a quiz (with a passing grade) covering the learning objectives specified.

*Criteria - Performance will be satisfactory when:*

- Learner lists the advantages and limitations of mobile computing.
- Learner identifies the various mobile computing devices.
- Learner explains how cell phone components resemble a traditional computer, and how they function.
- Learner defines a portable media player and lists its functions.
- Learner defines a PDA and identifies its internal components and features.
- Learner understands how to synchronize a PDA with a desktop computer.

9. Identify system hardware.

**Learning objectives**

*What you will learn as you master the competency:*

a. Define a switch and explain how it works.
b. Define binary number system and explain what role it plays in a computer system.
c. Identify the CPU components and explain how they operate.
d. Explain how CPUs process data and instructions.
e. Define cache memory.
f. Identify the different types of RAM.
g. Define a bus and explain how it functions in a computer system.
h. Explain how manufacturers create CPUs to run faster.

**Performance Standards**

*Competence will be demonstrated:*

- Completion of a quiz (with a passing grade) covering the learning objectives specified.

*Criteria - Performance will be satisfactory when:*

- Learner defines a switch and explains how it works.
- Learner defines the binary number system and explains what role it plays in a computer system.
o Learner identifies the CPU components and explains how they operate.
o Learner explains how CPUs process data and instructions.
o Learner defines cache memory.
o Learner identifies the different types of RAM.
o Learner defines a bus and explains how it functions in a computer system.
o Learner explains how manufacturers create CPUs to run faster.

10. Understand software programming.

Learning objectives

What you will learn as you master the competency:
a. Explain the system development life cycle and identify the phases in the cycle.
b. Explain the life cycle of a program.
c. Explain what role a problem statement plays in programming.
d. Understand the steps to create algorithms.
e. Explain how programmers move from algorithm code and what categories of language they may code in.
f. List the steps programmers use to move from code in a programming language to 1s and 0s the CPU can understand.
g. Explain how a program is tested.
h. Identify the steps involved in completing a program.
i. Explain how programmers select the right programming language for a specific task.
j. List the most popular programming languages for Windows and Web applications.

Performance Standards

Competence will be demonstrated:
o Completion of a quiz (with a passing grade) covering the learning objectives specified.

Criteria - Performance will be satisfactory when:
o Learner explains the system development life cycle and identifies the phases in the cycle.
o Learner explains the life cycle of a program.
o Learner explains the role a program statement plays in programming.
o Learner understands the steps to create algorithms.
o Learner explains how programmers move from algorithm code and what categories of language they may code in.
o Learners list the steps programmers use to move from code in a programming language to 1s and 0s the CPU can understand.
o Learner explains how a program is tested.
o Learner identifies the steps involved in completing a program.
o Learner explains how programmers select the right programming language for a specific task.
o Learner lists the most popular programming languages for Windows and Web applications.
11. Understand databases and information systems.

**Learning objectives**

*What you will learn as you master the competency:*

a. Define a dataset and list the benefits of using databases.
b. Identify the components of a database.
c. Differentiate among the different types of databases.
d. Explain what database management systems do.
e. Explain how relational databases organize and manipulate data.
f. Differentiate between data warehouses and data marts.
g. Define information system and identify what types of information systems are used in business.
h. Define data mining and explain how it works.

**Performance Standards**

*Competence will be demonstrated:*

- Completion of a quiz (with a passing grade) covering the learning objectives specified.

*Criteria - Performance will be satisfactory when:*

- Learner defines a database and lists the benefits of using databases.
- Learner identifies the components of a database.
- Learner differentiates among the different types of databases.
- Learner explains what database management systems do.
- Learner explains how relational databases organize and manipulate data.
- Learner differentiates between data warehouses and data marts.
- Learner defines information system and identifies what types of information systems are used in business.
- Learner defines data mining and explains how it works.

12. Explain network and security concerns and concepts.

**Learning objectives**

*What you will learn as you master the competency:*

a. List the advantages of a business network.
b. Differentiate between a client/server network and a peer-to-peer network.
c. Identify the classifications of client/server networks.
d. Identify the components needed to construct a client/server network.
e. Identify the various types of servers.
f. Explain the various network topologies (layouts), and why it is important in planning a network.
g. List the types of transmission media used in client/server networks.
h. Identify the software needed to run on computers attached to a client/server network, and how this software controls network communications.
i. Explain how network adapters enable computers to participate in a client/server network.
j. List devices that assist in moving data around a client/server network.
k. List ways to secure large networks.
Performance Standards

Competence will be demonstrated:
○ Completion of a quiz (with a passing grade) covering the learning objectives specified.

Criteria - Performance will be satisfactory when:
○ Learner lists the advantages of a business network.
○ Learner differentiates between a client/server network and a peer-to-peer network.
○ Learner identifies the classifications of client/server networks.
○ Learner identifies the components needed to construct a client/server network.
○ Learner identifies the various types of servers.
○ Learner explains the various network topologies (layouts), and why it is important in planning a network.
○ Learner lists the types of transmission media used in client/server networks.
○ Learner identifies the software needed to run on computers attached to a client/server network, and how this software controls network communications.
○ Learner explains how network adapters enable computers to participate in a client/server network.
○ Learner lists ways to secure large networks.

13. Understand how the Internet works.

Learning objectives
What you will learn as you master the competency:
a. Identify who manages and pays for the Internet.
b. Explain how the Internet’s networking components interact.
c. List data transmissions and protocols the Internet uses.
d. Explain the importance of IP addresses and domain names in Internet communications.
e. Differentiate between FTP and Telnet.
f. Explain the uses of HTML and XML.
g. Explain how e-mail and instant messaging work, and how messages are kept secure.

Performance Standards

Competence will be demonstrated:
○ Completion of a quiz (with a passing grade) covering the learning objectives specified.

Criteria - Performance will be satisfactory when:
○ Learner explains how the Internet networking components interact.
○ Learner lists data transmissions and protocols the Internet uses.
○ Learner explains the importance of IP addresses and domain names in Internet communications.
○ Learner differentiates between FTP and Telnet.
○ Learner explains the uses of HTML and XML.
○ Learner explains how e-mail and instant messaging work, and how messages are kept secure.
14. **Create documents using Excel.**

*Learning objectives*

*What you will learn as you master the competency:*

a. Understand spreadsheet software.
b. Tour the Excel window.
c. Understand Formulas.
d. Enter labels and values and use AutoSum.
e. Edit cell entries.
f. Enter and edit a simple formula.
g. Switch worksheet views.
h. Choose print options.

*Performance Standards*

*Competence will be demonstrated:*

- through the successful completion of a worksheet project.
- through the successful completion of chapter tests and quizzes.
- by successfully completing the final exam.

*Criteria - Performance will be satisfactory when:*

- Learner understands spreadsheet software.
- Learner tours the Excel window.
- Learner understands formulas.
- Learner enters labels and values and uses AutoSum.
- Learner edits cell entries.
- Learner enters and edits a simple formula.
- Learner switches worksheet views.
- Learner chooses print options.

15. **Work with formulas and functions.**

*Learning objectives*

*What you will learn as you master the competency:*

a. Create a complex formula.
b. Insert a function.
c. Type a function.
d. Copy and move cell entries.
e. Understand relative and absolute cell references.
f. Copy formulas with relative cell references.
g. Copy formulas with absolute cell references.
h. Round a value with a function.

*Performance Standards*

*Competence will be demonstrated:*

- through the successful completion of a worksheet project.
- through the successful completion of chapter tests and quizzes.
by successfully completing the final exam.

Criteria - Performance will be satisfactory when:
- Learner creates a complex formula.
- Learner inserts a function.
- Learner types a function.
- Learner copies and moves cell entries.
- Learner understands relative and absolute cell references.
- Learner copies formulas with relative cell references.
- Learner copies formulas with absolute cell references.
- Learner rounds a value with a function.

16. Format a worksheet.

Learning objectives
What you will learn as you master the competency:

a. Format values.
b. Change font and font size.
c. Change attributes and alignment.
d. Adjust column width.
e. Insert and delete rows and columns.
f. Apply colors, patterns, and borders.
g. Apply conditional formatting.
h. Name and move a sheet.
i. Check spelling.

Performance Standards
Competence will be demonstrated:
- through the successful completion of a worksheet project.
- through the successful completion of chapter tests and quizzes.
- by successfully completing the final exam.

Criteria - Performance will be satisfactory when:
- Learner formats values.
- Learner changes font and font size.
- Learner changes attributes and alignment.
- Learner adjusts column width.
- Learner inserts and deletes rows and columns.
- Learner applies colors, patterns, and borders.
- Learner applies conditional formatting.
- Learner names and moves a sheet.
- Learner checks spelling.
17. **Create, manipulate, and format charts.**

*Learning objectives*

*What you will learn as you master the competency:*

- a. Plan a chart.
- b. Create a chart.
- c. Move and resize a chart.
- d. Change the chart design.
- e. Change the chart layout.
- f. Format a chart.
- g. Annotate and draw on a chart.
- h. Create a pie chart.

*Performance Standards*

*Competence will be demonstrated:*

- through the successful completion of a worksheet project.
- through the successful completion of chapter tests and quizzes.
- by successfully completing the final exam.

*Criteria - Performance will be satisfactory when:*

- Learner plans a chart.
- Learner creates a chart.
- Learner moves and resizes a chart.
- Learner changes the chart design.
- Learner changes the chart layout.
- Learner formats a chart.
- Learner annotates and draws on a chart.
- Learner creates a pie chart.

18. **Create a typical database containing customer, contract, and invoice data.**

*Learning objectives*

*What you will learn as you master the competency:*

- a. Define the terms field, record, table, relational database, primary key, and foreign key.
- b. Create a blank database.
- c. Identify the components of the Microsoft Access window.
- d. Create and save a table in Datasheet view.
- e. Enter field names and records in a table datasheet.
- f. Open a table using the Navigation Pane.
- g. Open an Access database.
- h. Copy and paste records from another Access database.
- i. Navigate a table datasheet.
- j. Create and navigate a simple query.
- k. Create and navigate a simple form.
- l. Create, preview, navigate, and print a simple report.
m. Learn how to manage a database by compacting, backing up, and restoring a database.

**Performance Standards**

*Competence will be demonstrated:*

- in successful completion of multiple choice quizzes and practical exams
- in successful completion of lab assignments and projects.

*Criteria - Performance will be satisfactory when:*

- Learner defines the term fields, record, table, relational database, primary key, and foreign key.
- Learner creates a blank database.
- Learner identifies the components of the Microsoft Access window.
- Learner creates and saves a table in Datasheet view.
- Learner enters field names and records in a table datasheet.
- Learner opens a table using the Navigation Pane.
- Learner opens an Access database.
- Learner copies and pastes records from another Access database.
- Learner navigates a table datasheet.
- Learner creates and navigates a simple query.
- Learner creates and navigates a simple form.
- Learner creates, previews, navigates, and prints a simple report.
- Learner understands how to manage a database by compacting, backing up, and restoring a database.

19. **Build a database and define table relationships.**

*Learning objectives*

*What you will learn as you master the competency:*

a. Learn the guidelines for designing databases and setting field properties.
b. View and modify field data types and formatting.
c. Create a table in Design view.
d. Define fields and specify a table’s primary key.
e. Modify the structure of a table.
f. Import data from an Excel worksheet.
g. Create a table by importing an existing table structure.
h. Delete, rename, and move fields.
i. Add data to a table by importing a text file.
j. Define a relationship between two tables.

**Performance Standards**

*Competence will be demonstrated:*

- successful completion of laboratory assignments/projects
- multiple choice quizzes and practical exams.

*Criteria - Performance will be satisfactory when:*

- Learner understands the guidelines for designing databases and setting field properties.
- Learner views and modifies field data types and formatting.
Learner creates a table in Design view.
Learner defines fields and specifies a table's primary key.
Learner modifies the structure of a table.
Learner imports data from an Excel worksheet.
Learner creates a table by importing an existing table structure.
Learner deletes, renames, and moves fields.
Learner adds data to a table by importing a text file.
Learner defines a relationship between two tables.

20. Maintain and query a database.

Learning objectives
What you will learn as you master the competency:

a. Find, modify, and delete records in a table.
b. Learn how to use the Query window in Design view.
c. Create, run, and save queries.
d. Update data using a query datasheet.
e. Create a query based on multiple tables.
f. Sort data in a query.
g. Filter data in a query.
h. Specify an exact match condition in a query.
i. Change the font size and alternating row color in a datasheet.
j. Use a comparison operator in a query to match a range of values.
k. Use the and/or logical operators in queries.
l. Create and format a calculated field in a query.
m. Perform calculations in a query using aggregate functions to record group calculations.
n. Change the display of database objects in the Navigation Pane.

Performance Standards
Competence will be demonstrated:

- successful completion of laboratory assignments/projects
- multiple choice quizzes and practical exams.

Criteria - Performance will be satisfactory when:

- Learner finds, modifies, and deletes records in a table.
- Learner understands how to use the Query window in Design view.
- Learner creates, runs, and saves queries.
- Learner updates data using a query datasheet.
- Learner creates a query based on multiple tables.
- Learner sorts data in a query.
- Learner filters data in a query.
- Learner specifies an exact match condition in a query.
- Learner changes the font size and alternating row color in a datasheet.
- Learner uses a comparison operator in a query to match a range of values.
21. **Create forms and reports.**

**Learning objectives**

*What you will learn as you master the competency:*

a. Create a form using the Form Wizard.
b. Modify a form's design in Layout View.
c. Change a form's AutoFormat.
d. Add a picture to a form.
e. Change the color, line type, and position of items in a form.
f. Navigate a form and find data using a form.
g. Maintain table data using a form.
h. Preview and print selected form records.
i. Create a form with a main form and a subform.
k. Modify a report's design in Layout View.
l. Move and resize fields in a report.
m. Insert a picture in a report.
n. Change the font color of a report title.
o. Use conditional formatting in a report.
p. Preview and print a report.

**Performance Standards**

*Competence will be demonstrated:*

- successful completion of laboratory assignments/projects
- multiple choice quizzes and practical exams.

*Criteria - Performance will be satisfactory when:*

- Learner creates a form using the Form Wizard.
- Learner modifies a form's design in Layout View.
- Learner changes a form's AutoFormat.
- Learner adds a picture to a form.
- Learner changes the color, line type, and position of items in a form.
- Learner navigates a form and finds data using a form.
- Learner maintains table data using a form.
- Learner previews and prints selected form records.
- Learner creates a form with a main form and a subform.
- Learner creates a report using the Report Wizard.
- Learner modifies a report's design in Layout View.
- Learner moves and resizes fields in a report.
Learner inserts a picture in a report.
Learner changes the font color of a report title.
Learner uses conditional formatting in a report.
Learner previews and prints a report.

**Types of Instruction**
Classroom presentation.
On-campus laboratory.
Self-paced online simulation.

**Grading Information**

**Grading Rationale**
The post-test will count as the final exam and be represented as 10% of the overall grade.

**Grading Scale**
A  90-100%
B  80-89%
C  70-79%
D  60-69%
F  Below 60%