

# Digital Literacy, Skill Labs

## Course Specifications

Course Number: ACI76-030SL\_rev1.0

Lab Length: Approximately 18 hours

## Computer Hardware and Troubleshooting (PLAB-DIG-LIT)

### Introduction

#### Objective

Welcome to the Computer Hardware and Troubleshooting lab. In this lab, you will be provided with the instructions and devices needed to develop your hands-on skills.

#### Overview

#### Learning Outcomes

In this lab, you will complete the following exercise:

- Exercise 1 – Troubleshooting Hardware Issues in Windows
- Exercise 2 – Disk Defragmenter and Disk Cleanup
- Exercise 3 – Task Scheduler
- Exercise 4 – Using System Information

After completing this lab, you will be able to:

- Troubleshoot hardware related issues.
- Troubleshoot printing issues.
- Troubleshoot device drivers issues.
- Configure Disk Defragmenter.
- Use Disk Cleanup.
- Use Task Scheduler for Disk Cleanup.
- Collect System Information.

#### Exam Objectives

The following exam objective is covered in this lab:

- Troubleshooting common problems relating to computer hardware.
- Computer maintenance tools in Windows.

## Computer Software (PLAB-DIG-LIT)

### Introduction

#### Objective

Welcome to the Computer Software lab. In this lab, you will be provided with the instructions and devices needed to develop your hands-on skills.

### Overview

#### Learning Outcomes

In this lab, you will complete the following exercise:

- Exercise 1 – Working with Productivity Applications
- Exercise 2 – Create a Database with OpenOffice Base
- Exercise 3 – Create PDF Files with Foxit

After completing this lab, you will be able to:

- Download and install OpenOffice.
- Open a Word document with OpenOffice Write.
- Open an Excel Spreadsheet with OpenOffice Calc.
- Install Java Runtime Environment.
- Create a table.
- Create a form in design view.
- Enter a record in the form.
- Download and install Foxit PDF Reader.
- Create a PDF with Foxit Reader.

### Exam Objectives

The following exam objective is covered in this lab:

- Types of application software
- Install and work with productivity software
- Install and work with business software

## Operating System Types and Features - Part 1 (PLAB-DIG-LIT)

### Introduction

#### Objective

Welcome to the Operating System Types and Features – Part 1 lab. In this lab, you will be provided with the instructions and devices needed to develop your hands-on skills.

### Overview

## Learning Outcomes

In this lab, you will complete the following exercise:

- Exercise 1 – Comparison of Windows 7, 8.1, and 10
- Exercise 2 – Comparison of 32-bit and 64-bit Operating Systems
- Exercise 3 – Workstation Operating Systems
- Exercise 4 – Comparison of Cell Phone/Tablet Operating Systems
- Exercise 5 – Know the Vendor-Specific Limitations
- Exercise 6 – Compatibility Concerns between Operating Systems
- Exercise 7 – Configure Time and Language Settings
- Exercise 8 – Configure User Accounts Settings
- Exercise 9 – Perform System Configuration

After completing this lab, you will be able to:

- Know the interface differences.
- Use search.
- Know the key differences between 32-bit and 64-bit operating system.
- Verify a 64-bit operating system.
- Select a workstation operating system as per the need.
- Learn about cell phone operating systems.
- Know the vendor-specific limitations of operating systems.
- Know about same vendor compatibility and different vendor compatibility.
- Configure time/date/region/language settings.
- Configure a local user account.
- Configure user account control settings.
- Configure remote connectivity settings.
- Configure performance settings.
- Configure system protection settings.

## Exam Objectives

The following exam objectives are covered in this lab:

- Operating system fundamentals
- Operating system types and features
- Change system settings

## Operating System Types and Features - Part 2 (PLAB-DIG-LIT)

### Introduction

#### Objective

Welcome to the Operating System Types and Features – Part 2 lab. In this lab, you will be provided with the instructions and devices needed to develop your hands-on skills.

### Overview

#### Learning Outcomes

In this lab, you will complete the following exercise:

- Exercise 1 – Change Desktop Styles/User Interfaces
- Exercise 2 – Work with Folder Options
- Exercise 3 – Work with Different File Systems
- Exercise 4 – Managing Storage Spaces
- Exercise 5 – Troubleshoot Microsoft Windows Issues
- Exercise 6 – Learning to Troubleshoot

After completing this lab, you will be able to:

- Change interface settings in PLABWIN10.
- Work with the General tab.
- Work with the View tab.
- Work with the Search tab.
- Verify the settings configured in Folder Options.
- Create FAT32 and NTFS file systems.
- Configure the Network File System (NFS).
- View the swap partition on CentOS.
- View the swap file in Windows 10.
- Initialize a disk.
- Partition a dynamic disk.
- Explore disk management operations.
- Reinitialize a disk.
- Manage Storage Spaces.
- Troubleshoot operating system issues.
- Troubleshoot application issues.
- Troubleshoot network issues.
- Work with troubleshooting options.

## Exam Objectives

The following exam objective are covered in this lab:

- Use an operating system to manipulate the desktop, files, and disks.
- Solve common problems related to operating systems.

## Introduction to Networking - Part 1 (PLAB-DIG-LIT)

### Introduction

#### Objective

Welcome to the Introduction to Networking – Part 1 lab. In this lab, you will be provided with the instructions and devices needed to develop your hands-on skills.

### Overview

#### Learning Outcomes

In this lab, you will complete the following exercise:

- Exercise 1 – Networking Fundamentals
- Exercise 2 – Know about the OSI Model
- Exercise 3 – Layers 1 to 3 of the OSI Model
- Exercise 4 – Layers 4 to 7 of the OSI Model
- Exercise 5 – Contrast TCP and UDP Protocols
- Exercise 6 – Configure Port 21 for FTP
- Exercise 7 – Configure Port 161 for SNMP

After completing this lab, you will be able to:

- Types of network.
- Advantages of network computing.
- Explain the history and structure of the OSI model.
- Compare the OSI model to the TCP/IP model.
- Use the OSI model to implement troubleshooting.
- Examine components of the physical layer of the OSI model.
- Examine components of the data link layer of the OSI model.
- Examine components of the network layer of the OSI model.
- Examine components of the transport layer of the OSI model.
- Know about session and presentation layers of the OSI model.
- Examine components of the application layer of the OSI model.
- Capture packets.
- Identify TCP packets.

## Course Outline

- Identify UDP packets.
- Install Web Server (IIS) role.
- Set up an FTP site.
- Verify FTP access from PLABWIN10.
- Install SNMP agent.
- Configure SNMP properties.

### Exam Objectives

The following exam objectives are covered in this lab:

- Network fundamentals
- Benefits of network computing

## Introduction to Networking - Part 2 (PLAB-DIG-LIT)

### Introduction Objective

Welcome to the Introduction to Networking – Part 2 lab. In this lab, you will be provided with the instructions and devices needed to develop your hands-on skills.

### Overview

#### Learning Outcomes

In this lab, you will complete the following exercise:

- Exercise 1 – Spoof a DNS Server
- Exercise 2 – Explore DNS Server Vulnerabilities
- Exercise 3 – Run MBSA to Detect System Vulnerabilities

After completing this lab, you will be able to:

- Enable IIS on the PLABDC01 device.
- Verify name resolution on the network.
- Send continuous pings.
- Verify that the Apache Server is running on the PLABRTR01 device.
- Install Ettercap on the attacking device.
- Start ARP poisoning using Ettercap.
- Edit ettercap.conf and ettercap.dns.
- Activate DNS spoofing plug-in.
- Add DNS resource records.
- Install MBSA.

## Course Outline

- Turn off firewall for MBSA scan.
- Run MBSA to scan computers.
- Run MBSA from the command line.

### Exam Objectives

The following exam objective is covered in this lab:

- Risks of network computing

## Online Communication (PLAB-DIG-LIT)

### Introduction

#### Objective

Welcome to the Online Communication lab. In this lab, you will be provided with the instructions and devices needed to develop your hands-on skills.

#### Overview

#### Learning Outcomes

In this lab, you will complete the following exercise:

- Exercise 1 – Electronic Communication

After completing this lab, you will have further knowledge of:

- Types of Electronic Communication
- Introduction to Email
- Email Clients
- Email Service Providers
- Email Messaging
- Social Networking
- Top Social Networking Sites
- What is a Profile?
- Information Available on Social Networking Sites
- Geotagging
- Instant Messaging (IM)

### Exam Objectives

The following exam objective is covered in this lab:

- Types of electronic communication/collaboration and how they work

## Web Browsing (PLAB-DIG-LIT)

### Introduction

#### Objective

Welcome to the Web Browsing lab. In this lab, you will be provided with the instructions and devices needed to develop your hands-on skills.

### Overview

#### Learning Outcomes

In this lab, you will complete the following exercise:

- Exercise 1 – Manage Web Browsers
- Exercise 2 – Manage Web Browser Cache
- Exercise 3 – Manage Client-Side Scripting
- Exercise 4 – Configure Browser Add-ons and Privacy Settings

After completing this lab, you will be able to:

- Import bookmarks.
- Populate the web browser cache of Chrome and Edge.
- View and delete browser cache data.
- Disable and enable client-side scripting in Google Chrome.
- Add a pop-up blocker in Google Chrome.
- View and add extensions in Google Chrome and Microsoft Edge.
- Enable private browsing.

### Exam Objectives

The following exam objectives are covered in this lab:

- Website fundamentals
- Types of browsers
- Using a web browser

## Internet Security (PLAB-DIG-LIT)

### Introduction

#### Objective

Welcome to the Internet Security lab. In this lab, you will be provided with the instructions and devices needed to develop your hands-on skills.

### Overview

#### Learning Outcomes

## Course Outline

In this lab, you will complete the following exercise:

- Exercise 1 – Common Threats on the Internet
- Exercise 2 – Implementing Anti-Malware Practices
- Exercise 3 – Running an Anti-Spyware Application

After completing this lab, you will be able to:

- Learn about malware.
- Learn about social engineering.
- Explore and gather information for social engineering.
- Learn about the denial-of-service (DoS) attack.
- Learn about the distributed denial-of-service (DDoS) attack.
- Learn about zero-day.
- Learn about man-in-the-middle (MITM) attack.
- Learn about the brute-force attack.
- Learn about the dictionary attack.
- Learn about the rainbow table.
- Learn about the spoofing attack.
- Internet safety guidelines.
- Use Windows security.
- Use an online anti-malware scanner.
- Install antispyware.
- Run SUPERAntiSpyware.

### Exam Objectives

The following exam objective is covered in this lab:

- Common threats
- Internet safety guidelines
- Types of malware
- Malware prevention

## Microsoft Word Fundamentals - Part 1 (PLAB-DIG-LIT)

### Introduction

#### Objective

Welcome to the Microsoft Word Fundamentals – Part 1 lab. In this lab, you will be provided with the instructions and devices needed to develop your hands-on skills.

#### Overview

## Learning Outcomes

In this lab, you will complete the following exercise:

- Exercise 1 – Traversing within Word Documents
- Exercise 2 – Defining Page Layout in Word Documents
- Exercise 3 – Working with Headers, Footers, and Page Background Elements
- Exercise 4 – Handling File Formats

After completing this lab, you will be able to:

- Search for text within a document.
- Move to a specific location or object in a document.
- Link to a location within a document.
- Show and hide formatting symbols in a document.
- Show hidden text in a document.
- Apply style sets in a document.
- Modify page setup.
- Insert a document header and footer.
- Modify the document header and footer.
- Configure page background elements.
- Save a document in alternative file formats.
- Modify basic document properties.
- Modify the document print settings.

## Exam Objectives

The following exam objective are covered in this lab:

- Navigate Word.
- Print documents.
- Save documents.
- Format documents.

## Microsoft Word Fundamentals - Part 2 (PLAB-DIG-LIT)

### Introduction

#### Objective

Welcome to the Microsoft Word Fundamentals – Part 2 lab. In this lab, you will be provided with the instructions and devices needed to develop your hands-on skills.

#### Overview

## Learning Outcomes

In this lab, you will complete the following exercise:

- Exercise 1 – Handling Text and Paragraph Formatting
- Exercise 2 – Working with Comments
- Exercise 3 – Working with Text Boxes
- Exercise 4 – Working with Numbered Lists
- Exercise 5 – Working with List Levels and List Numbering

After completing this lab, you will be able to:

- Apply formatting by using the Format Painter.
- Set line and paragraph spacing and indentation.
- Clear formatting.
- Apply built-in styles to text.
- Add, review, reply, and resolve comments.
- Delete comments.
- Insert a text box.
- Add and modify text in a text box.
- Format paragraphs as a numbered list and define a custom number format.
- Increase and decrease list levels.
- Restart and continue list numbering or set a starting number value.

## Exam Objectives

The following exam objectives are covered in this lab:

- Format text and paragraphs
- Add and delete comments
- Insert and format text boxes
- Insert and format lists

## Microsoft Word Fundamentals - Part 3 (PLAB-DIG-LIT)

### Introduction

#### Objective

Welcome to the Microsoft Word Fundamentals – Part 3 lab. In this lab, you will be provided with the instructions and devices needed to develop your hands-on skills.

### Overview

#### Learning Outcomes

## Course Outline

In this lab, you will complete the following exercise:

- Exercise 1 – Working with Tables
- Exercise 2 – Altering Tables
- Exercise 3 – Inserting Graphic Elements
- Exercise 4 – Working with Graphic Elements
- Exercise 5 – Working with SmartArt Graphics

After completing this lab, you will be able to:

- Create tables using Draw and Insert.
- Convert document text to a table.
- Resize tables, rows, columns, and sort table data.
- Convert tables to text.
- Configure a repeating row header in a table.
- Split a table.
- Split and merge cells in a table.
- Insert images.
- Insert shapes.
- Apply artistic effects.
- Apply picture styles.
- Format graphic elements.
- Insert SmartArt graphics.
- Add and modify SmartArt graphic content.
- Format SmartArt graphics.

### Exam Objectives

The following exam objective are covered in this lab:

- Insert and format tables.
- Insert and format images.
- Insert and format graphics.

## Microsoft Excel Fundamentals - Part 1 (PLAB-DIG-LIT)

### Introduction

#### Objective

Welcome to the Microsoft Excel Fundamentals - Part 1 lab. In this lab, you will be provided with the instructions and devices needed to develop your hands-on skills.

#### Overview

## Learning Outcomes

In this lab, you will complete the following exercise:

- Exercise 1 – Worksheet and Workbook Navigation
- Exercise 2 – Modifying Row Height and Column Width
- Exercise 3 – Configuring Print Settings
- Exercise 4 – Inserting and Deleting Cells
- Exercise 5 – Formatting Cells
- Exercise 6 – Formatting Cells Using Format Painter
- Exercise 7 – Working with Excel Tables
- Exercise 8 – Formatting Excel Tables

After completing this lab, you will be able to:

- Create a blank workbook and navigate around cells in a worksheet.
- Use the Go To feature and navigate to a named range.
- Adjust row height and column width.
- Print worksheet/s or an entire workbook.
- Change page orientation and page margins.
- Change scaling options and paper size of the printed page.
- Print copies of the worksheets/workbook.
- Insert and delete cells in a worksheet.
- Apply number formats.
- Apply cell formats from the format cells dialog box.
- Clear cell formatting.
- Apply cell styles.
- Paint a format from one range onto another.
- Paste formats or values.
- Convert a cell range to an Excel table.
- Apply a new table style and clear the existing formatting.
- Convert an Excel table to a cell range.
- Configure table style options.
- Add or remove table rows and columns.

## Exam Objectives

The following exam objective are covered in this lab:

- Navigate Excel.

## Course Outline

- Print a workbook.
- Adjust row height and column width.
- Insert and delete cells.
- Format cells.
- Clear cell formatting.
- Create a table.

## Microsoft Excel Fundamentals - Part 2 (PLAB-DIG-LIT)

### Introduction

#### Objective

Welcome to the Microsoft Excel Fundamentals - Part 2 lab. In this lab, you will be provided with the instructions and devices needed to develop your hands-on skills.

#### Overview

#### Learning Outcomes

In this lab, you will complete the following exercise:

- Exercise 1 – Finding Data in a Workbook
- Exercise 2 – Filtering Records in a Table
- Exercise 3 – Paste Data
- Exercise 4 – Working with Formulas
- Exercise 5 – Working with Cell References
- Exercise 6 – Using Mathematical Functions
- Exercise 7 – Count Cells Using the COUNT(), COUNTA() and COUNTBLANK() Functions
- Exercise 8 – Performing Conditional Operations Using the IF() Function
- Exercise 9 – Formatting Text by Using Text Functions
- Exercise 10 – Creating Charts and Chart Sheets

After completing this lab, you will be able to:

- Use find and replace feature.
- Use AutoFilter.
- Filter a table using complex criteria.
- Paste data using Paste Special options.
- Perform calculations with formulas.
- Control the order of operations.
- Insert relative references.
- Use an absolute reference in a formula.

## Course Outline

- Use functions to calculate sums and averages.
- Insert a function.
- Use the COUNT(), COUNTA(), and COUNTBLANK() functions.
- Use IF() function to determine sales commissions.
- Format text by Using RIGHT(), LEFT(), LEN(), and MID() functions.
- Format text by Using CONCATENATE() and TEXTJOIN() functions.
- Create a pie chart.
- Create a line chart.
- Create a chart sheet.

### Exam Objectives

The following exam objectives are covered in this lab:

- Search for data in a workbook
- Use filters
- Paste data into a workbook
- Manipulate data using basic formulas and functions
- Create charts

## Microsoft PowerPoint Fundamentals - Part 1 (PLAB-DIG-LIT)

### Introduction

#### Objective

Welcome to the Microsoft PowerPoint Fundamentals - Part 1 lab. In this lab, you will be provided with the instructions and devices needed to develop your hands-on skills.

### Overview

#### Learning Outcomes

In this lab, you will complete the following exercise:

- Exercise 1 – Exploring the PowerPoint Environment
- Exercise 2 – Creating Presentations
- Exercise 3 – Creating and Modifying Slide Content
- Exercise 4 – About Layouts
- Exercise 5 – Headers and Footers
- Exercise 6 – Working with Notes Pages
- Exercise 7 – Working with Shapes and Images
- Exercise 8 – Working with Text Boxes
- Exercise 9 – Printing

## Course Outline

After completing this lab, you will be able to:

- Explore PowerPoint.
- Create and save a blank presentation.
- Create a template-based presentation.
- Insert a slide in a presentation.
- Add text to a slide.
- Format text as hyperlink.
- Work with text styles.
- Work with layouts.
- Add footer.
- Work with notes pages.
- Work with shapes.
- Work with images.
- Insert and modify text in a text box.
- Explore preview and print settings.

### Exam Objectives

The following exam objective are covered in this lab:

- Navigate PowerPoint.
- Presentation print settings.
- Insert headers, footers, and slide numbers.
- Add notes.
- Insert slides.
- Insert and format text.
- Insert images and shapes.
- Insert text boxes.

## Microsoft PowerPoint Fundamentals - Part 2 (PLAB-DIG-LIT)

### Introduction

#### Objective

Welcome to the Microsoft PowerPoint Fundamentals - Part 2 lab. In this lab, you will be provided with the instructions and devices needed to develop your hands-on skills.

#### Overview

#### Learning Outcomes

In this lab, you will complete the following exercise:

- Exercise 1 – Working with Slide Masters and Themes
- Exercise 2 – Animating Slide Content

## Course Outline

- Exercise 3 – Proofing Your Presentation
- Exercise 4 – Slide Transitions
- Exercise 5 – The Custom Shows Feature
- Exercise 6 – Presenter View
- Exercise 7 – Saving a Presentation in Other Formats
- Exercise 8 – Protect a Presentation

After completing this lab, you will be able to:

- Apply themes to a presentation.
- Create and work with animations.
- Proof your presentation.
- Set slide transitions.
- Explore the Custom Shows feature.
- Explore Presenter View and PowerPoint's Rehearsal mode.
- Save a presentation in other formats.
- Mark a presentation as final.

### Exam Objectives

The following exam objectives are covered in this lab:

- Apply a theme to a presentation.
- Work with animations.
- Proof a presentation.
- Apply basic slide transitions.
- Explore the Custom Shows feature.
- Present slide shows using Presenter View.
- Save a presentation in other formats.
- Mark a presentation as final.

## Microsoft Outlook Fundamentals - Part 1 (PLAB-DIG-LIT)

### Introduction

#### Objective

Welcome to the Microsoft Outlook Fundamentals - Part 1 lab. In this lab, you will be provided with the instructions and devices needed to develop your hands-on skills.

#### Overview

#### Learning Outcomes

## Course Outline

In this lab, you will complete the following exercise:

- Exercise 1 – Navigating the Outlook Interface
- Exercise 2 – Viewing Outlook Items
- Exercise 3 – Sending Email Messages
- Exercise 4 – Responding to Email Messages
- Exercise 5 – Adding Content to an Email
- Exercise 6 – Managing Folders

After completing this lab, you will be able to:

- Explore menu tabs.
- Discover the menu ribbon.
- Explore panes on the Outlook interface.
- Search specific Outlook messages.
- Send a simple email.
- Send the same email to multiple recipients.
- Format the message text.
- Check spellings and grammar of the message text.
- Reply to a message.
- Forward a message.
- Manage a message.
- Flag a message.
- Configure automatic replies.
- Add and send an attachment.
- Save and remove an attachment.
- Add signatures to an email.
- Create a folder.
- Copy a message into a folder.
- Copy a folder on the same location.
- Rename a folder.
- Delete a folder.

### Exam Objectives

The following exam objective is covered in this lab:

- Navigate Outlook.
- Configure automatic replies.
- Print emails.

## Course Outline

- Create and format email messages.
- Use CC and BCC.
- Add or remove attachments.
- Forward and reply to messages.
- Save attachments.
- Flag messages.
- Create and use folders.

## Microsoft Outlook Fundamentals - Part 2 (PLAB-DIG-LIT)

### Introduction

#### Objective

Welcome to the Microsoft Outlook Fundamentals - Part 2 lab. In this lab, you will be provided with the instructions and devices needed to develop your hands-on skills.

#### Overview

#### Learning Outcomes

In this lab, you will complete the following exercise:

- Exercise 1 – Using Outlook to Manage Appointments
- Exercise 2 – Using Outlook to Manage Meetings
- Exercise 3 – Using the Outlook Calendar
- Exercise 4 – Managing Contacts

After completing this lab, you will be able to:

- Create an appointment.
- Create a recurring appointment.
- Share an appointment.
- Create a meeting.
- Respond to a meeting request.
- Update a meeting.
- Cancel a meeting.
- Explore the Outlook Calendar.
- Customize the Outlook Calendar.
- Explore a Contact Card.
- Save a contact.
- Create a business card.
- Edit a business card.

## Course Outline

- Create a contact group.
- Share a contact.

### Exam Objectives

The following exam objectives are covered in this lab:

- Create appointments and recurring appointments
- Create, respond, update, and cancel a meeting
- Use scheduling assistant
- Explore and customize Outlook Calendar
- Work with contacts
- Create and edit business cards
- Create contact groups