



**FIRST STEPS - Digital Literacy Course**

**NECA Training Curriculum**

**DIGITAL LITERACY-FIRST STEPS**

**MODULE ONE – COMPUTER SYSTEMS**

### SLIDE-1: (cover slide) FIRST STEPS

*What is digital literacy?*

**Is it** *the ability to use Internet technology, communication tools and computers to locate, evaluate, create and store information?*

**Is it** *the ability to understand and use information in multiple formats?*

**Or is it** *simply a set of skills that allows one to use a computer to shop, apply for a job, share photos, play a game, watch movies or plan a vacation?*

The answer is all three. Digital literacy embraces the concept of viewing and interpreting various forms of media *through digital manipulation*. The end result is to be able to evaluate and apply knowledge gained from digital environments *to everyday life*.

FIRST STEPS is one of three digital literacy courses available to assist NECA members and their community partners with efforts to improve digital literacy abilities within their communities. This is a foundational course that builds skills each student should master prior to enrolling in either of the next two courses: INTERNET ACCESS and COMPUTER TOOLS. These three courses are divided into several modules. Each module builds on the preceding one with the goal of allowing each student to become competent using a computer and to enjoy the experiences of a “connected life” when they gain the necessary skills to access the World Wide Web (a.k.a. the Internet).

Class Descriptions:

- FIRST STEPS overviews basic computer skills. Students will learn how to: connect a computer to required and optional devices; how to turn on the computer and log on; and how to navigate around a computer. The student will also be taught how to create folders to store and retrieve items easily. Lastly, the student will learn how to print and how to replicate items by using the cut, copy, and paste features.
- The INTERNET ACCESS course shows the student how to use the skills acquired in the FIRST STEPS course to access the Internet. They will learn how to use the Internet to gather information; use electronic mail and to purchase products and services.
- The COMPUTER TOOLS course highlights advanced features of the computer. It introduces software based services such as Microsoft Suite products. It overviews portable storage devices, different Internet access methods, digitizing documents and other useful functions.

*NOTE: Offering all three courses is highly recommended.*

The next slide further outlines the two digital literacy courses and each of the modules. The time required to teach a given module will vary depending on the instructor’s individual approach towards teaching and time spent allowing students to practice learned skills.

### SLIDE-2: Curriculum Outline

This curriculum is oriented towards interactive teaching methods. A substantial amount of time should be spent on hands-on learning activities. Recommended hands-on training segments are indicated by an animated “CLASS TIME” icon. When this icon appears, the materials outlined in the previous slides are practiced by the student with the instructor’s oversight. This approach should greatly enhance student understanding and retention.

There are two other resources available with NECA’s Digital Literacy Curriculum. They include a Microsoft Word transcription of the instructor notes for each module, and an instructional work plan, describing each module and the resources required to effectively teach them. **SLIDE-2: Course Flow Diagram**

The FIRST STEPS course is comprised of four modules:

- *Computer Systems* – Overviews types of computers, computer peripherals (for example keyboards and printers), computer power up and log on.
- *Computer Desktop* – Overviews the start menu, toolbars and taskbars, mouse, keyboards, monitors, desktop icons and shortcuts, printing, and computer power down.
- *Introduction to Computer Utilities* – Provides training on common computing tasks.
- *Electronic Folders and Files* –Overviews computer navigation, windows, libraries and folders.

For each course, there are three tools available:

1. The slide deck for the course
2. A Word document containing instructor notes for each slide
3. An instructional work plan for each module (shown on the next slide)

*NOTE: This slide is required for each course*

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### SLIDE-3: Instructional Work-plan template

This document is available for every module. It provides a description of each module and its goals, estimated class length, module prerequisite skills and resources needed to effectively teach the class.

*NOTE: This slide is required for each module*

### SLIDE-4: (cover slide) Computer Systems

The Computer Systems module overviews the basic skills required to use a computer. Students learn about:

- Various computing devices
- Commonly used peripheral equipment and how they are connected to the computer
- How to turn on a computer and prepare it for use

The slide notes are organized as follows:

- **Bolded** words, or **groups of words**, describe a bulleted item
- Background information
- *Italicized information* denotes particular emphasis, such as a critical concept

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### SLIDE-5: Agenda

Many of these terms will be unfamiliar to the student. Assure the student this is normal and that they should not be intimidated.

**Desktop computer** – Computers come in a variety of styles. The desktop is a style of computer typically intended for use at a single location. A desktop requires a constant power connection and needs to be connected to other devices, a.k.a. peripherals, to be used. Peripherals are discussed later. These computers are commonly found in offices, schools, and libraries.

**Laptop computer** – This type of computer is often used by those who need to move the computer to different locations (i.e., traveling employees and students). While these computers often cost more than comparably equipped desktop computers, they have the advantage of *mobility*. In addition, laptop computers are not as reliant on external devices to operate.

**Smartphones and tablets** – For more than two decades, hand-held devices have been sold that allow customers to make phone calls using a cellular network. These devices, commonly called cell phones, have become smaller over time and in general, cheaper. Because they allow the user to make calls from anywhere a wireless network is available, they quickly became the prominent device to make calls.

More recently, manufacturers have added features to cell phones that allow the user to perform many of the same functions available in a desktop or laptop computer. These enhanced devices are often referred to as smartphones. They allow the user to not only make and receive calls, but also to access the Internet and to use features known as applications or “apps.” Apps are covered in upcoming training modules.

Shortly after the appearance of the smartphone, manufacturers introduced another type of hand-held computer device sized somewhere between a mobile phone and a laptop. These devices are called

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“tablets.” With a tablet, a user can connect to the Internet just like they can with a smartphone, but do so with a slightly larger screen.

**Peripheral equipment** – In this section, the equipment and cables needed to use a computer system are described in detail. Think of connecting the computer to its peripherals the same way someone would think about connecting various pieces of a stereo system together. For example, the stereo amplifier is the heart of the sound system. However, it needs cables to connect to the speakers, CD player, and for those who still use older media - a tape recorder or record player.

**Powering up and logging on** – In this section the student will learn how to turn on a computer and ready it for use. When powering up a computer, a security feature is typically enabled. This feature is called a “log on.” Using a log on protects the computer from being accessed by unauthorized users.

Think of the log on as a combination lock – only the computer owner and the other people with the owner’s authorization have the combination. These passwords are a combination of letters and numbers chosen by the computer’s owner or administrator to protect the information stored within. Finally, we discuss how to turn the computer off or put it in standby mode.

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### SLIDE-6: (transition slide) Different Types of Computers

As just mentioned, there are many types of computers. In this section, features and advantages of various computing devices will be discussed in detail.

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### SLIDE-7: Different Types of Computers – Desktops

Desktop computers are often used at a fixed location. While desktops can be moved, desktops are not typically considered mobile devices.

Desktop computers are typically more economical when compared to comparably equipped laptops or tablets. This is because the desktop components do not have to be as compact, making the selection of electronics more versatile and assembly much easier.

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### SLIDE-8: Different Types of Computers – Desktop examples

This slide shows examples of desktop systems with essential peripherals.

The basic complement of external equipment for a desktop includes a keyboard, computer screen (monitor) and a mouse.

*NOTE: Explain to the student that these peripherals will soon be discussed in detail.*

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### SLIDE-9: Different Types of Computers – Laptops and Notebooks

**Laptop and notebook computers** are becoming increasingly common. This preference is largely driven by the laptop’s portability. A person who owns a laptop or notebook has the option of using these

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computers almost anywhere. They are small enough to fit in a backpack, purse, or briefcase. These devices can run with or without an electric connection and are relatively light when compared to a desktop. A laptop or notebook also has the capability to connect to the Internet anywhere there is a public broadband connection. Public locations such as coffee shops, libraries and airports, are examples of “anywhere” Internet connections. Some of these connections are provided for free, while others are available for a fee.

*NOTE: Broadband, in terms of Internet access methods, is covered in the INTERNET ACCESS course.*

**Notebooks** are very similar to laptops and can perform most of the basic computing functions. They are often less expensive than laptops.

Another advantage of laptops and notebooks is they can be used without an external keyboard, mouse or monitor (computer screen). Unlike most desktops, these items are built into the single device. The top cover of a laptop/notebook contains the monitor. The keyboard is contained in the bottom section as is the mouse functionality. Monitors, keyboards and the mouse will be discussed later in this training. Examples of all these peripherals are shown in the next section.

As mentioned earlier, laptops are generally more expensive relative to a desktop with equivalent functionality. Also, it may be more expensive, or impossible to upgrade components on some laptop or notebook models.

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### **SLIDE-10: Different Types of Computers – Laptop examples**

Laptops come in a variety of sizes, quality, and performance levels. For example, some laptop computers are designed to be more sturdy (i.e., hardened construction), allowing them to withstand harsh conditions such as those found in emergency service or military scenarios. Some perform better (i.e., faster) than others, while some have longer-lasting batteries. Others are thinner and lightweight. Also, laptops sell for a wide range of prices. As with other electronic devices, typically the more feature-rich computers are, the more expensive they are.

The power adapter is shown here. The adapter charges the battery inside the laptop. One end of the cord is plugged into the laptop and the other end into an electrical wall outlet.

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### **SLIDE-11: Different Types of Computers – Notebook examples**

Notebooks are often smaller and lighter than laptops and usually lower in cost. As mentioned earlier, notebooks typically have less functionality when compared to laptops and desktops. However, the basic tasks such as accessing the Internet or reading and creating emails, are supported. Internet access and electronic mail are covered in the INTERNET ACCESS course.

*NOTE: Notebooks require power adapters as well.*

### **SLIDE-12: Different Types of Computers – Smartphones**

Connecting to the Internet has not always been possible with cellular technology. With today's smartphones, this is now commonplace.

**Smartphones**, like laptops and notebooks, can be used without an external monitor, keyboard or mouse. In addition, these devices can make and receive calls and have the ability to connect to the Internet via cellular networks or WiFi hotspots. Laptops can also connect to a cellular network, but require an adapter and an additional service from a cellular company. Smartphones are also much smaller than a laptop. Many can fit nicely into a pocket. In addition to making calls and accessing the Internet (and email), they also perform tasks such as taking photos, storing and retrieving music and playing videos.

Texting is another popular feature for smartphone users. Texting allows individuals to send short messages with as much as 160 characters (numbers, punctuation, and spaces) to another user.

*NOTE: Texting is described in more detail in the INTERNET ACCESS class.*

*Keep in mind; smartphones require recharging as well.*

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### **SLIDE-13: Different Types of Computers – Smartphone examples**

This slide illustrates some of the diversity in smartphones. Some basic dimensions are shown to provide perspective of their overall size.

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### **SLIDE-14: Different Types of Computers – Smartphone examples**

The smartphones pictured on the left are typical of contemporary mobile smart devices. Smartphone operation often requires the user to touch a virtual screen-based keyboard to type letters and numbers, navigate or activate a feature. In other words, touching a picture of a keyboard or small icons on the screen is how one controls the device. Some devices, like the one on the right, contain a miniature physical keyboard for typing and a touch pad for navigation and feature activation.

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### **SLIDE-15: Different Types of Computers – Tablets**

Just like smartphones, tablets are small and self-contained. They provide nearly the same functionality as a smartphone (most don't have the ability to make a phone call without additional VoIP service), and quite often more features and functionality.

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### **SLIDE-16: Different Types of Computers – Tablet example**

Average size of a tablet is shown here to provide perspective.

*NOTE: Mention there are numerous styles available as shown on the next slide.*

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### **SLIDE-17: Different Types of Computers – Tablet examples**

The number of different styles reflects their popularity and the manufacturer's desire to meet a variety of consumer preferences.

***HANDS ON** – Pass around any available devices previously described*

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### **SLIDE-18: Different Types of Computers – Mac vs. PC**

***NOTE-1:** Explain this slide is here for completeness and serves to briefly explain Mac computers, but Mac computers are not covered further in the training.*

**PC vs. Mac** – there are two distinct categories of computer. Each one performs the same basic functions, but does so in a slightly different manner.

Preference for one or the other is influenced by several factors such as peer group or workplace environments. However, some computer users use both. For example, a person may use a PC at work and a Mac at home.

Apple products, such as their Mac (short for Macintosh) computers, are typically made with **ONLY** Apple components and software and are not reliant on other computer component manufacturers to make their product. This allows Apple to produce unique compact products.

**PCs**, whether they are made by IBM, ASUS, DELL, ACER or another manufacturer, are typically built from components manufactured by a variety of vendors, which minimizes the available design options.

**3<sup>rd</sup> Party software** – Examples

Operating systems – Windows XP/Vista/Windows 7/Windows 8

Software – Microsoft Office 2010 (Word, Excel, PowerPoint, Access), Adobe Photoshop, etc.

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### **SLIDE-19: (transition slide) Connecting Peripherals**

In the last section, several terms were used to reference various computer components. In this section, the most common peripherals are described. This section also describes how one can connect these components to the computer.

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### **SLIDE-20: Connecting Peripherals – Comparison chart**

The comparison chart provides students with a basic understanding of the various terms used in the training by comparing them to more familiar concepts.

**Computer keyboards** allow the user to type information into the computer or enter computer commands. The keyboard contains letters, numbers and symbols. Their layout is similar to a typewriter.

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**A mouse** enables a user to move the computer's pointer to a specific location on the computer screen. The pointer is used to activate a computer process or program or position the user for a task such as typing an entry. A mouse has buttons to provide a variety of functions. *These functions will be demonstrated shortly.*

**Monitors** – Think of the monitor as being very similar to a TV screen. It allows the user to view the computer's processes and functions and to view documents, pictures, movies, Internet websites, etc.

**Printers** allow the user to reproduce a physical copy of what is seen on the screen or to print pages contained in a specific document.

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### SLIDE-21: Computer Peripherals

This slide has six animation sequences. View in "Slide Show" presentation mode to see the animation effects.

The material on this slide show reinforces the terms just covered. *Additional detail will be provided throughout the training.*

The following items are required to use a desktop computer:

- Keyboard, monitor and mouse. On most desktops the user cannot do anything without attaching these devices. NOTE: Some newer computers have the screen built into the computer.

*NOTE: A laptop can also use an external monitor, keyboard, and mouse if the user so chooses.*

Optional equipment:

- A printer is required if the user wishes to produce a physical copy of something. A printer can be attached by cables or wireless technology to desktops, laptops, notebooks, tablets and smartphones.

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### SLIDE-22: Connecting Peripherals

As just discussed, peripherals such as keyboards, printers and mice often need to be attached to the computer. These devices are connected to the computer via one or more types of points of connection, commonly referred to as a port.

In the past, each peripheral had a dedicated port type. More recently, Universal Serial Bus (USB) ports were introduced and since have become a more common way to connect peripherals. Most computers come with several USB ports.

*NOTE: It doesn't matter which USB port is used for a peripheral. The computer automatically detects and adapts to whatever device is connected.*

### SLIDE-23: Connecting Peripherals – Desktops

This slide displays the most common ports.

- (4) Computer to monitor – This port is where the monitor cable is connected.
- (1-purple or 5) Computer to keyboard – This port is where the keyboard cable is connected. In older computers keyboards connect to a PS2 port (#1).
- (1-green or 5) Computer to mouse – This port is where the mouse cable is connected. In older computers, these cables connected to a PS2 port (#1).
- (6 or 5) Computer printer – This port is where the printer cable is connected. In older computers, these cables connected to a parallel port (#6).
- (3) Speaker cable – This port is where external computer speaker cables are connected.

*NOTE-1: This can also be called an audio jack or audio plug in.*

- (2) This port is where a wire connected to a broadband service is connected. It is commonly referred to as an Ethernet Port.

*NOTE-2: broadband is covered in INTERNET ACCESS*

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### SLIDE-24: Connecting Peripherals – Cable examples

(Color coded cable example)

This slide displays the cables often used to connect peripherals to the computer. However, depending on the manufacturer and model, newer printers, keyboards and mice may be connected using USB cables and in some cases peripheral may be connected via a wireless technology.

*NOTE: Explain there are more types of cables than illustrated here. They are discussed in subsequent classes.*

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### SLIDE-25: Connecting Peripherals – Cable connection examples

(Diagrammed example)

This diagram illustrates cables and their associated ports. Some of these cables and ports are covered in other modules.

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### SLIDE-26: Connecting Peripherals – Keyboard

There are two different port and cable possibilities:

LEFT – Universal Serial Bus (USB)

RIGHT – PS-2 connector

*NOTE: The keyboard does not have two cables as shown on this slide. This diagram is just showing possible cable types.*

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### **SLIDE-27: Connecting Peripherals – Mouse**

Describe connections.

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### **SLIDE-28: Connecting Peripherals – Printer**

Describe connections

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### **SLIDE-29: Connecting Peripherals – Monitor**

Describe connections

*NOTE: Most computers use the same types of cables*

***HANDS-ON:** If desktops are in front of the student, have students practice connecting the cables to the ports as described above.*

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### **SLIDE-30: (transition slide) Laptop Connections**

As mentioned earlier, laptops have a number of setup benefits over desktops – namely, laptops require less external equipment.

*NOTE: While the user has the option of connecting an external keyboard, mouse or monitor, it is not required as these items are built into the machine*

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### **SLIDE-31: Laptop Connections – Port Example**

Laptop ports function the same as those found on a desktop, however, they are often located in a different place. Regardless, laptops use the same cables as desktops when connecting to a keyboard, mouse, monitor, or printer.

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### **SLIDE-32: Laptop Connections – Port Example**

Not all laptops have the same ports in the same location. Each manufacturer designs their computers differently. While the physical locations of ports may vary from computer to computer, their functionality remains the same.

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### **SLIDE-33: Laptop Connections – Laptop Mouse (Touchpad)**

Touchpads move a cursor on the screen based on finger movement. They provide a similar function to a mouse but are built into the laptop base. An external mouse is not needed but can be connected to the laptop if that is the user's preference.

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**HANDS-ON:** *If laptops are in front of the student, and peripherals are available, have the students practice connecting the cables to the laptop ports as described above.*

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### **SLIDE-34: (transition slide) Powering Up and Logging On**

This is the first step in using a computer, and it's an easy one. The next few slides show examples of where power buttons can be found and what to expect after pressing it.

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### **SLIDE-35: Powering Up – Turn on a computer**

When a computer is turned on, the computer readies itself for use. After pressing the “On” button, some lights may flicker on and off and may eventually stay on.

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### **SLIDE-36: Powering Up – Desktop Examples**

This slide provides an example of what power buttons look like, and also, where they can be found.  
*NOTE: tower computer examples are shown here.*

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### **SLIDE-37: Powering Up – Laptop Examples**

Like desktops, laptops have power buttons placed in various locations.

**HANDS ON** – *Have the students press their power buttons on either the desktop or laptop (whichever applies).*

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### **SLIDE-38: Logging On**

A log on step might be required to use a computer. As mentioned earlier, this is a security feature to prevent someone other than a designated owner or an authorized user from accessing the computer.

A log on is similar to a combination lock. It helps secure the computer and any sensitive information stored on it. The log on password may consist of a combination of letters (upper and/or lower case) and numbers.

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### **SLIDE-39: Logging On**

There's more than one type of log in prompt, but they all perform the same function. In each, the user must enter a “user-name” and a “password.”

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### **SLIDE-40: Logging On**

After successfully logging on, the computer's desktop appears. (This may take some time, depending on the computer system.) A desktop is the computer's main graphical page. It is the subject of the next section.

**HANDS ON** - *Have each student log on to the computer using preconfigured USER IDs and Passwords.*

**SLIDE-41: Computer Systems – Powering down**

When not in use, it is considered a best practice to power the computer down (turn it off).

*NOTE-1: Make sure to instruct the student to SAVE their work before powering down.*

Optionally, a computer can be placed in a standby (a.k.a. hibernation) mode. Use standby when planning to use the computer at a later time, typically within an hour or so. Standby allows the user to resume using the computer without having to go through a full power-up, which may take several minutes.

*NOTE-2: To activate the standby feature, press “Ctrl”+ “Alt”+ “Delete” simultaneously.*

In other cases, a computer may need to be restarted; again, students need to save their work prior to restarting. For example, some software programs require a restart to finish installing updates. Restart is simply a way to turn the computer off, and then back on, without touching the power button.

**HANDS ON** - *Have each student switch to standby mode, then restart the computer, and finally shut it down.*

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**SLIDE-42: Recommend Next Steps**

These modules are the next three foundational modules. After finishing these, the initial course “FIRST STEPS” is complete.