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| **Course Code & Number: Name:** | |
| **Course Developer/Author:  Email:** | **eLearning Instructional Designer: Nickolas Gallegos** |

**Module Number and Title:** Directly from the *Course Design Plan: Modules* section. You will create a module design plan for each module on that document.

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| **Wireshark Activity** |

Module Overview: Directly from the *Module Overview* column from the *Course Design Plan: Modules* section*.*

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| **In this module, students will learn about the importance of ensuring they are using secure & encrypted communication channels, especially on public networks. Students will see how applications like Wireshark can be used to watch wired and wireless internet traffic and what encrypted and unencrypted data looks like.** |

Module Objectives:In the space below, provide the module objectives. There are typically 1 – 5 module objectives that describe what the students will be able to do after completing this module.Identify the course objective(s) that align with each module objective and, if necessary, describe the relationship. Objectives should encourage higher level thinking. *For assistance with writing effective course objectives, please refer to these resources:* [Bloom’s Taxonomy](http://cft.vanderbilt.edu/guides-sub-pages/blooms-taxonomy/) *and* [OPA Resource](http://www.depts.ttu.edu/opa/resources/docs/Program_Assessment_Handbook_4_13_2015.pdf) (page 7)*.*

**For K-12 courses,** **leave the Module Objectives blank in the beginning**—you will align modules to TEKS first, and then, at the end of development, you will write succinct module objectives that integrate TEKS with the actual tasks of the module.

| **Module Objectives**  By the completion of this module, students will be able to: | **Bloom’s Taxonomy Level** | **Assessment Strategy** | **Course Objectives Alignment (#)** |
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| 1. Identify when they are on a secure or unsecured communication channel | Understand |  |  |
| 1. Utilize software to view internet traffic and find an unencrypted password | Apply |  |  |
| 1. Identify encrypted and unencrypted data | Understand |  |  |
| 1. Define key terms like HTTP, HTTPS, TLS, SSL, TCP, & UDP | Remember |  |  |

Task Outline:In the table below, provide a title for each task students will need to complete in order to learn the topic/content. Describe the task and the reasoning for including in this module. Finally, note the module objective(s) that each task aligns with. **For K-12 courses,** list the detailed TEKS item that the task aligns with or supports (TEKS 1A, 1B, etc.). A K-12 example has been provided to illustrate how this document works. [Gagne’s Nine Events of Instruction](http://citt.ufl.edu/tools/gagnes-9-events-of-instruction/)

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| **Step # of** [Gagne’s Nine Events…](http://citt.ufl.edu/tools/gagnes-9-events-of-instruction/) | **Task Title** | **Task Description/Rationale**   1. Write in first or second person, addressing students directly. 2. Include rationale or purpose for the task. Relate to Module Objectives where appropriate. 3. Explicit instructions for completing the task. | **Module Objective Alignment (#) or TEKS** |
| *1* | *Opening Activity* | *Below is a new clip about a controversial issue in the last presidential election. As you learn more about the presidency in this lesson, you’ll be able to look back on what you see here and decide if your understanding of this event has changed at all. Watch the video, take a few notes, and then take the Lesson Opener quiz to make sure you understood the most important parts.[link to video]* | 8B, 10B, 11C |
| 1 | Explain the key internet protocols used in this module | Mention the OSI model and the two layers that surfing the web is typically concerned with. Talk about the HTTP/HTTPS, TLS, SSL TCP, and UDP protocols and how they will apply to this experiment. |  |
| 2 | Explain what Wireshark is and how to use it for this module | Discuss the Wireshark application and some of its uses. Show how to scan internet traffic and view what the data looks like in Wireshark. Define what “Packets” are and view a few examples. |  |
| 3 | View an example of a secure and an unsecure webpage | Explicitly do a search to an unsecured website (maybe a local site/server utilizing HTTP) and then do a search to a secured site (known to utilize HTTPS with TLS). |  |
| 4 | “Sniff” some packets using Wireshark. | Perform an activity where students scan an interface (ethernet or Wi-Fi) and work together to identify an unsecured network and find a unsecured information like a message or password. |  |
| 5 | Review and explain how to ensure safety while using the internet | Discuss the experiment and talk about the ways to ensure an attacker cannot get access to your information. Talk about encryption methods and things to be aware of when on the internet. |  |
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