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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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| **Man in the Middle Attack** |

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 what a man in the middle attack is and how it could affect SCADA systems. They will use a computing device to perform this attack within a small network.** |

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 the Address Resolution Protocol (ARP) is used in internet communications | Understand |  |  |
| 1. Utilize software tools to perform a MiTM Attack | Apply |  |  |
| 1. Identify the vulnerabilities that allow for a MiTM Attack | Understand |  |  |
| 1. Define the terms: HTTP/HTTPS, ARP, DNS | 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 | Discuss what a Man in The Middle (MiTM) attack is | Explain what a MITM attack is and how it could affect SCADA systems. |  |
| 2 | Explain what tools and internet protocols are used | Students will learn what software tools are potentially used by a hacker and what internet protocols are utilized by the software. |  |
| 3 | Perform the hack | Students will utilize a combination of tools to understand how the hack is performed. |  |
| 4 | Show what can be done once the hack is performed | Once access is established, display what is possible by taking the hack a step further. |  |
| 5 | Review and explain the ways this type of attack can be prevented | Students will review what they’ve accomplished and how this type of hack can be prevented. |  |
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