



### Course Information:

Course # - Course Title: NWIT230 – Introduction to Cyber Ops

Course Format: Lectures, discussions, weekly labs, team exercises

Class Day/Time:

Semester Period:

Location:

### Instructor Contact Information:

Name:

Email:

Physical Office Hours:

Virtual Office Hours:

### Montgomery College Course Description:

The course will provide students that have minimal prior knowledge, or those in need of a refresher, with an understanding of the architecture of modern computers and topics spanning how a CPU works, the addressing of memory and the hardware relationship with operating systems. The course includes an introduction to both Windows and Linux, providing students with plenty of hands-on exercises to build their familiarity with the command line and move their knowledge beyond being a power user to actually understanding the underlying facets of a modern OS. Additionally, the course will teach logic, programming and scripting and introduces how each of these can lead to errors that allow security experts or cyber criminals to find faults and exploit them and provides the perfect balance of hands-on labs and theory in order to ensure that students can study security effectively and put their hands on the keyboard, rather than just understanding theory.

### Common Course Student Learning Outcomes

Upon the completion of this course, students will be able to:

- Understand computer operating systems, hardware and software components
- Understand Linux fundamentals and security
- Understand Windows fundamentals and security
- Understand common security vulnerabilities in systems and applications.
- Secure workstations and servers running current Windows OS software, and test the effectiveness of various security measures.

Technical and implementation skills developed during the course include:

- Identify OSI and TCP/IP model layers and their application
- Understand IP addressing schemes and network protocols
- Identify Network services such as DNS, DHCP, APR, etc.
- Run Linux command line tools (ps, ls, netstat, ect)
- Implement user and system controls on Linux OS's
- Run Windows command line tools, PowerShell, to analyze the systems
- Understanding of Web application attacks, low level attacks, protocol vulnerabilities

**Required Materials:**

**Textbook:** None

**Lab Manual:** License to SANS Essentials (and CPA game). The instructor will also provide instructions for weekly hands-on.

**Lab Use:** Yes

**MC Bookstore:** <http://www.montgomerycollege.edu/bookstore>

**Evaluation:**

Weekly Hands-On Labs.....	25 Points
Participation (class discussion, surveys, etc.) .....	20 Points
Midterm Exam .....	25 Points
Final Exam .....	30 Points

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Total Available Points	100 Points
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