

## Course Outcomes Guide

**Course Title: CYB 240 Ethical Hacking Fundamentals**

**Course Instructor(s): Carrie Pifer/Steve Shank**

**Programs: AAS Cyber Security, AS Cyber Security**

### **Expected Learning Outcomes**

- Think critically
- Perform and share cooperatively in team projects
- Review and practice computer and network etiquette and ethics found in working environments
- Evaluate and implement new and future technologies into current system
- Install, configure, use and manage hacking software on a closed network environment
- Evaluate best practices in security concepts to maintain confidentiality, integrity and availability of computer systems

**Assessment** (How do students demonstrate achievement of these outcomes?)

Satisfactory scores on exams and projects.

Satisfactory scores on exams modeled after industry standard certification exams. Models are developed from the following certification exam: Certified Ethical Hacker (ECCouncil).

Complete Group Projects

In closed network environment or virtual network environment employ various reconnaissance, scanning, and enumeration techniques to obtain information regarding a target network system.

**Validation** (What methods are used to validate your assessment?)

1. Approval of Information Systems Technology Advisory Council
2. Tests comparable to Industry Standard Certification Exams (Certified Ethical Hacker).
3. Faculty Review
4. Pearson IT Certification curriculum
5. Author Michael Gregg, a leading security consultant and certification expert

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6. Red/Blue team scenarios similar to those found in CCDC competitions

### **Results** (What do the data show?)

Since the 2013 spring semester a total of 32 students have taken CYB240 Ethical Hacking Fundamentals.

27 (84%) of the students completed the course and 27 (84%) were successful.

The grade distribution is as follows:

|   |    |     |
|---|----|-----|
| A | 13 | 41% |
| B | 8  | 25% |
| C | 6  | 19% |
| D | 0  | 0%  |
| F | 3  | 9%  |

There was 0 audit and 2 withdrew from the course.

### **Follow-up**

84% of students completing course requirements successfully complete coursework

The virtual Netlab labs have been instituted into the curriculum. These labs were developed by the Center for Systems Security and Information Assurance (CSSIA). The creations of these labs was funded by the National Science Foundation's (NSF) Advanced Technological Education (ATE) program Department of Undergraduate Education (DUE) Award No. 0702872 and 1002746; Center for Systems Security and Information Assurance (CSSIA) is an entity of Moraine Valley Community College.

### **Budget Justification**

(What resources are necessary to improve student learning?)

PC lab, projection unit, printer

Netlabs

Course Management software

Cisco hardware lab equipment; switches/routers/firewalls available to students