Hagerstown Community College
OFFICIAL COURSE SYLLABUS DOCUMENT

COURSE: CYB 240 – Ethical Hacking Fundamentals   3 Credits

INSTRUCTOR: **SEMESTER/YEAR:**

COURSE DESCRIPTION: In this course students will become familiar with offensive network security, ethical hacking and responsibility and network defense and counter measures. Student will study testing, scanning and securing information systems. Topics include hacker methodology and tools, how they operate and how to set up strong countermeasures and defensive systems to protect an organization's critical infrastructure and information. Course fee required. Total 45 contact hours.

TEXTBOOKS: Ethical Hacking and Countermeasures: Attack Phases. EC-Council, Cengage, 2010. ISBN: 1-4354-8360-X
Ethical Hacking and Countermeasures: Threats and Defense Mechanisms. EC-Council, Cengage, 2010. ISBN: 1-4354-8361-8

STUDENT LEARNING OUTCOMES:

- Think critically
- Communicate effectively with both verbal and written forms
- Identify the steps of the hacker methodology
- List and describe the current threats to computer systems and network.
- 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

COURSE GUIDELINES

ASSESSMENT PROCEDURES:			
		90 – 100	A
Chapter Assignments -	25%	80 – 90	B
Class Discussion/Summary -	25%	70 – 79	C
Labs -	25%	60 – 69	D
Capstone Project -	25%	below 60	F

• **Chapter Assignments** are found in Moodle in document format. Download document, answer questions and perform tasks, then submit document in Moodle.

• *Class Discussion/summary -* Participation in chapter discussions. Submit report with title page summarizing what you learned from the chapter and a discussion of the activities and web research for the chapter. The summary should review three concepts from the chapter readings, exercises, activities, and discussions that are meaningful to you. Your review should thoroughly discuss these concepts to show that you have grasped the material and understand their application. Do not simply recap the chapter's topics. Instead, discuss how each of the concepts should be used in application and explain why it has relevance to you. This should be completed in Microsoft Word format and placed in Moodle.

• **Labs.** Download and upload from/to Moodle. This will include various activities.

• **Capstone Project.** Download, complete and submit project in Moodle.

The following is outline for a 16 week semester. It can be adjusted to fit different term lengths.

IST 240 ETHICAL HACKING FUNDAMENTALS
TOPICAL OUTLINE

Week of	Topic	Assignment
Aug 27	AP Chap 1 – Introduction to Ethical Hacking *Definitions*	
Sep 3	AP Chap 2 – Footprinting *Hands on activities*	
Sep 10	AP Chap 3 – Scanning *Hands on activities*	
Sep 17	AP Chap 4 – Enumeration *Hands on activities*	
Sep 24	AP Chap 5 – System Hacking *Techniques*	
Oct 1	AP Chap 6 – Pen Testing *Guidelines*	
Oct 8	TD Chap 1 – Trojans and Backdoors	
Oct 15	TD Chap 2 – Viruses and Worms	
Oct 22	TD Chap 3 – Sniffers	
Oct 29	TD Chap 4 – Social Engineering	
Nov 5	TD Chap 5 – Phishing	

Nov 12	TD Chap 6 – Denial of Service	
Nov 19	TD Chap 7 – Buffer Overflows	
Nov 26	Capstone Project	
Dec 3		
Dec 10	Final	