WILMINGTON UNIVERSITY
COLLEGE OF TECHNOLOGY
BASIC COURSE INFORMATION

COURSE TITLE: Ethical Hacking
COURSE NUMBER: SEC 425

I. MAJOR INSTRUCTIONAL OBJECTIVES:

Objective A: Get an introduction to ethical hacking and its various components
A-1. Learn about the role of security and penetration testers
A-2. Evaluate different penetration testing methodologies
A-3. Understand what can and cannot be done legally in ethical hacking

Objective B: Review TCP/IP concepts and the various types of network computer attacks
B-1. Identify the various layers and elements of the TCP/IP protocol stack to grasp how networking protocols can be compromised
B-2. Learn about protection against malware attacks in the forms of viruses, worms, Trojan programs and spyware
B-3. Discuss the various intruder activities on networks and computers in terms of attacks such as Denial of Service, buffer overflows, ping of death and session hijacking.
B-4. Address issues related to physical security such as key loggers and what goes on behind closed doors.

Objective C: Consider the challenges that footprinting and social engineering presents to information security
C-1: Learn what footprinting is and how to use web tools for footprinting
C-2: Learn how competitive intelligence is conducted.
C-3: Discuss the various forms of social engineering such as shoulder surfing, dumpster diving and piggybacking

Objective D: Examine the impact port scanning and enumeration has on the confidentiality, integrity and availability of information whether in transit, storage or processing
D-1: Study how port scanning can make computer networks vulnerable
D-2: Examine the various enumeration tools for Microsoft Windows and UNIX systems
D-3: Consider the issues involved in desktop and server operating system vulnerabilities
D-4: Discuss the various ways for hacking web servers, wireless networks and cryptographic systems
II. CLASS PARTICIPATION:

Students are expected to attend class and participate actively and in a positive way. Questions and relevant observations are encouraged and enrich the experience of the entire class. Computers in the classrooms are intended to be used as tools to enhance the students’ learning experience. Instant messaging, gaming, emailing, and surfing the web are distractions to the student, the surrounding students, and the instructor and constitute inappropriate behavior. Students are ethically obliged to avoid these and similar practices.