

## **CSC 455 - ENTERPRISE SECURITY**

**CREDIT HOURS:** 3

**PREREQUISITES:** CSC 321 or 331 or 355.

**GRADE REMINDER:** Must have a grade of C or better in each prerequisite course.

### **CATALOG DESCRIPTION**

Practical approaches to ensuring the security of information systems. May not be used to satisfy computer science requirements for a major or minor in computer science or computer information systems.

### **PURPOSE OF COURSE**

The purpose of this course is to provide the student with an understanding of tools and techniques employed to assure security in information systems. Legal, ethical, professional, and technical issues will be addressed. Current topics will be explored.

### **EDUCATIONAL OBJECTIVES**

Upon successful completion of the course, students should be able to:

1. Demonstrate an understanding of the computer security field through identification of need, social issues, risk assessment and planning.
2. Demonstrate an understanding of the threats and controls for operating system and network security and to study specific system vulnerabilities.
3. Identify techniques of disaster planning and recovery.
4. Identify the tools and techniques of digital forensics.
5. Describe current topics in the computer security field.

### **COURSE CALENDAR**

This course meets for a minimum of 37.5 lecture contact hours during the semester, including the final exam. Students have significant weekly reading assignments. Students are expected to complete 8-9 homework assignments, and 2-3 periodic exams in addition to the final exam. Students are expected to prepare for any class assignments or quizzes over the material covered in class or in the reading material. Successful completion of these activities requires at a minimum six additional hours of outside of classroom work each week.

### **CONTENT**

### **HOURS**

Introduction and Scope .....	3
Legal, Ethical, Professional Issues	
Risk Management and Planning	
Personnel, Physical, and Maintenance Security Issues	
Security Assessment .....	10
Attack Vectors	
Vulnerability Assessment and Audit	

## Disaster Planning

Security Implementation Policy .....	2
Intrusion Prevention, Detection, and Recovery .....	10
Authentication	
Firewalls.....	10
Architecture	
Components	
Bastion Hosts	
Cryptography .....	3
Virtual Private Networks .....	2
Current Topics .....	2
Exams (plus final).....	3
	TOTAL      45

## REFERENCES

Kim and Solomon, Fundamentals of Information Systems Security, Jones & Bartlett, 2014

Smith, Elementary Information Security, Jones and Bartlett, 2016

Harris, All-in-one CISSP, 7<sup>th</sup> Ed., McGraw Hill, 2016

Pfleeger, Security in Computing, 5<sup>th</sup> Ed., Prentice Hall, 2015