**CCF 3457 NETWORK FORENSIC INVESTIGATIONS**

**Contact Hours** 45

**Pre-requisites** Network Design and Implementation

**Purpose of the Course**

The course aims to introduce Cyber-attack prevention, detection, response, and investigation with the goals of counteracting cybercrime, cyber terrorism, and cyber predators, and making the responsible persons/groups accountable

**Expected Learning Outcomes**

By the end of the course, the student should be able to:

1. Identify fundamental knowledge and hands-on practice on computer and network forensics.
2. Apply the knowledge of computer and network forensics.
3. Develop skills in securing today's network-centric computing environment.

**Course Content**

**Digital Forensics**: An Overview on forensics,Forensics Basics and Criminalities,Advanced Topics in Computer and Network Forensics.

**Forensic Modeling and Principles Forensic**: Duplication Forensics Analytics File Carving Cyber Forensics Tools and the Testing Thereof Mobile Device Forensics Network Surveillance and Accountability Network Attack Traceback and Attribution Multicast Fingerprinting Multimedia Forensics.

**Intrusion and Online Frauds Detection** : Steganography & Steganalysis, **Anonymity/Pseudonymity/P3P**: Cyber Law, Security and Privacy Policies and Guidelines. **Case Studies, and ethical issues**: Court Testimony and Report Writing Skills

**Mode of Delivery**

* Lectures
* Tutorials
* Independent study
* Group discussions
* Case studies

**Instructional Materials**

Overhead projector and computer, handouts, white boards, appropriate software

**Course Assessment**

Type Weighting (%)

Examination 70

Continuous Assessment 30

Total 100

**Core Reading Material**

1. Middleton, B. (2005). *Cyber Crime Investigator’s Field Guide, Second Edition*. CRC Press.
2. Prosise, C., & Mandia, K. (2001). *Incident Response: Investigating Computer Crime*. Osborne/McGraw-Hill.

**Recommended Reading Material**

1. Kruse, W. G. I., & Heiser, J. G. (2002). *Computer Forensics: Incident Response Essentials*. Addison-Wesley.