Course number and name: 460CIS-3 Information System Security Administration

Credits and contact hours: 3 crs.; 5hrs (2hrs theory, 2hrs Lab and 1 hr. Tutorial)

Instructor's Name: Ahmed Monjurul Hasan

Text book, Title, Author, and Year: Charles P. Pfleeger "Security in Computing", Fourth Edition Prentice Hall, ISBN-10: 0-13-239077-9 William Stallings, "Cryptography and Network Security", Fifth Edition, Prentice Hall ,ISBN-10: 0136097049

a. **Supplemental Materials:**
   - Michael Whitman, Robert Mattord, "Principles of Information Security", Fourth Edition, Course Technology, ISBN-10: 1-111-13821-4.
   - Vincent Nestler,"Principles of Computer Security CompTIA Security+ and Beyond Lab Manual", Second Edition, McGraw-Hill Osborne Media, ISBN-10: 0071748563

Specific Course Information

a. **Catalog Description:** Security fundamentals, policies, procedures, and mechanisms. Identification, authentication models, access control models. Data models, concepts and mechanisms for software, hardware, operating system and database security. Basic cryptography (symmetric and asymmetric) and its applications. Security in computer networks and distributed systems. Attacks types and how to prevent them. Prevention and control of viruses and other rogue programs. In addition, the basics of physical security, incidence response, disaster recovery, business continuity, and forensics.
b. **Pre-requisites or Co-requisites:** 370CIS-3 Data Communication and Computer Networks
c. **Required, Elective, or Selected elective:** Required

Specific Goals for the Course

a. **Specific Outcomes of the Instruction:**
   - Define the basic concepts in information security
   - Describe different cryptography techniques and algorithms
   - Define the concepts of authentication and access control
   - Illustrate the security aspects of Database and security issues in Operating Systems
   - Analyze the security issues in Computer Networks
   - Describe different countermeasures to stop or to recover from an attack
b. **Students Outcomes Addressed by the Course:** a, b, e

Brief List of Topics to be Covered

- Is There a Security Problem in Computing?

- Elementary Cryptography
- Program Security
- Protection in General-Purpose Operating Systems
- Legal, Ethical and Professional issues
- Database and Data Mining Security
- Security in Networks
- Administering Security