CSCE 201 - Introduction to Computer Security
- **Credit Hours:** 3 hours
- **Contact Hours:** 3 lecture hours
- **Instructor:** Dr. Csilla Farkas, Ms. Neema Kanapala
- **Required Textbooks:**
  - Security Awareness-Applying Practical Security in your World by Mark Ciampa, Fifth edition, 2017, Cengage ISBN: 9781305500372
  - Computer Security Fundamentals by Chuck Easttom, Third edition, 2016, Pearson ISBN: 9780789757463
- **Bulletin Description:** Introduction to the theory and practice of computer security, including security policies, authentication, digital certificates, firewalls, malicious code, legal and ethical issues, and incident handling.
- **Prerequisite or Corequisite:** CSCE 101 or CSCE 102 or CSCE 145
- **Required Course** in CIS
- **Course Outcomes:** Students will be able to:
  1. Understand basic concepts and practices of information security
  2. Understand tools and techniques used by attackers to penetrate computer systems
  3. Understand tools and techniques used by defense to protect computer systems
  4. Check for security updates, apply and use patches and other defense mechanisms
  5. Understand and follow security and privacy policies
  6. Understand the ethical implications of using attack tools on computer systems

- **Student Outcomes addressed by course**

Program	Student Outcomes Addressed
Computer Engineering	N/A
Computer Information Systems	1, 2, 4, 6
Computer Science	N/A

- **Topics covered:**
  1. Overview of computer security, risks and threats, (3 hours)
  2. Operating Systems. Security capabilities of different platforms (3 hours)
  3. Identification and authentication. Passwords, spoofing attacks (3 hours)
  4. Access Control and Firewalls, ownership. Basic cryptography (3 hours)
  5. Assessing and Securing a system (3 hours)
  6. Software security. Malware: Viruses, worms, freeware and spyware (3 hours)
  7. Network security, TCP/IP primer. Firewall and Router security, PKI (3 hours)
  8. Web security. Web application security (3 hours)
  9. Internet Fraud and Cyber Crime (3 hours)
  10. Popular applications (6 hours)
  11. Ethics (3 hours)
  12. Security and privacy (6 hours)