Course number and name: CS 07350: Computer Cryptography
Credits and contact hours: 3 credits/3 contact hours
Instructor’s or course coordinator’s name: Seth Bergmann

Specific course information

Catalog description: This course introduces students to the principles and practices which are required for secure communication: cryptography, cryptanalysis, authentication, integrity, and digital certificates. Mathematical tools and algorithms are used to build and analyze secure cryptographic systems with computers. Social, political, and ethical aspects of cryptography are also covered.

Prerequisites: CS 04222 Data Structures and Algorithms.

Type of Course: ☒ Elective

Specific goals for the course

1. Understand fundamental mathematics needed for cryptography and cryptanalysis.
2. Understand encryption/decryption, digital signatures, and digital certificates.
3. Apply the concepts described above to ensure confidentiality, integrity, and authenticity. Apply the above concepts for elementary cryptanalysis.