## NSU IA Courses

* [CSC-430 DATA COMMUNICATION](http://cset.nsu.edu/ia/education/coursepage.php?ID=26)  
  Study of principles of computer communication as well as hardware and software designs, including transmission media, data encoding, transmission techniques, protocols, switching networks, broadcast networks, and local area networks.
* [CSC-435 COMPUTER SECURITY](http://cset.nsu.edu/ia/education/coursepage.php?ID=27)  
  This course is designed for seniors and IT professionals to learn computer and network security theories and practices that can be used to significantly reduce the security vulnerability of computers on internal networks or the Internet. The course assumes some familiarity with various operating systems and computer networks. Topics include cryptography, program security, operating systems security, database security, network security, security administration, computer ethics and legal issues.
* [CSC-445 COMPUTER NETWORK DEFENSE](http://cset.nsu.edu/ia/education/coursepage.php?ID=89)  
  A one-semester, undergraduate-level course focuses on computer network defense and countermeasures. It is designed to give students a solid foundation in network security fundamentals. The course covers both the conceptual and practical aspects of network security. It first reviews the threats to network security, the defense-in-depth strategy and technologies, and network security policy design and implementation. The course then explores the three key network defense technologies in depth: firewalls, intrusion detection and prevention systems, and virtual private network. An emphasis on labs and projects will provide students hands-on learning experiences in using popular open- source and “industry-standard” tools and solutions to implement a wide spectrum of defense measures to protect computer networks, and to detect, respond to, and recover from intrusion.
* [CSC-530 DATA COMMUNICATION](http://cset.nsu.edu/ia/education/coursepage.php?ID=39)  
  Study of principles of computer communication as well as hardware and software designs, including transmission media, data encoding, transmission techniques, protocols, switching networks, broadcast networks, and local area networks.
* [CSC-535 COMPUTER SECURITY](http://cset.nsu.edu/ia/education/coursepage.php?ID=40)  
  This course is designed for seniors and IT professionals to learn computer and network security theories and practices that can be used to significantly reduce the security vulnerability of computers on internal networks or the Internet. The course assumes some familiarity with various operating systems and computer networks. Topics include cryptography, program security, operating systems security, database security, network security, security administration, computer ethics and legal issues.
* [CSC-635 COMPUTER SECURITY II](http://cset.nsu.edu/ia/education/coursepage.php?ID=61)  
  This course is designed for Security System Administrators and Managers who are responsible for the design, planning and management of security installations in Business and Government Institutions. Topics include Management of Information Security, security planning, security protection (technical and procedural), best practices, risk management, Operations Security, legal issues and certification and accreditation. The course assumes some familiarity with various topics taught in an Introduction to Information Assurance course.
* [CSC-650 CRYPTOGRAPHY](http://cset.nsu.edu/ia/education/coursepage.php?ID=54)  
  Study of historical and modern cryptographic techniques and algorithms. Topics include symmetric and asymmetric key cryptography, one-way functions, secure hash functions, digital signatures, key exchange, authentication, key management, PKI, DES, AES (Rijndael), current topics.
* [CSC-760 Secure Software Development](http://cset.nsu.edu/ia/education/coursepage.php?ID=155)  
  A graduate course in the Information Assurance Track. It introduces basic concepts and latest research trends and results in developing secure software. Topics include the best practices in developing secure software within Software Development Lifecycle (SDLC).
* [CSC-765 ADVANCED TOPICS IN INFORMATION ASSURANCE](http://cset.nsu.edu/ia/education/coursepage.php?ID=68)  
  Survey of current topics in Information Assurance.
* [CSC-781 COMPUTER NETWORK DEFENSE](http://cset.nsu.edu/ia/education/coursepage.php?ID=69)  
  A one-semester, graduate-level course focuses on computer network defense and countermeasures. It is designed to give students a solid foundation in advanced network security fundamentals. The course covers both the conceptual and practical aspects of network security. It first reviews the threats to network security, the defense-in-depth strategy and technologies, and network security policy design and implementation. The course then explores the three key network defense technologies in depth: firewalls, intrusion detection and prevention systems, and virtual private network. An emphasis on labs and projects will provide students hands-on learning experiences in using popular open-source and “industry-standard” tools and solutions to design and implement a wide spectrum of defense measures to protect computer networks, and to detect, respond to, and recover from intrusion.