Advanced Computing Security Clusters

A matriculated student in the B.S. in Computing Security needs to take 6 elective courses. It is required to take 3 courses from one of the following clusters, and 3 courses from the approved Advanced Electives. If the course has * next to it, that course is required if it is in your chosen cluster.

Students can create customized clusters for their special interests provided compositions of clusters are vested by one faculty, one student academic advisor, and approved by the department chair. Courses in a customized cluster should be on the list of approved advanced elective courses of Computing Security. To be counted as a cluster course, a GCCIS course not on the list of advanced elective courses of Computing Security needs to be approved by the chair on a case by case basis, or simply such a course can be counted as a free elective for students. A course prepended with an asterisk is a required course for the cluster.

**Network and System Security:**
* CSEC 461 Computer System Security
* CSEC 462 Network Security and Forensics
 CSEC 465 Network & System Security Audit
 CSEC 469 Wireless Security
 CSEC 471 Penetration Testing Frameworks & Methodologies
 CSEC 473 Cyber Defense Techniques

**Forensics & Malware:**
* CSEC 464 Computer Systems Forensics
* CSEC 466 Introduction to Malware
 CSEC 476 Malware Reverse Engineering
 CSEC 462 Network Security and Forensics
 CSEC 465 Network & System Security Audit
 CSEC 467 Mobile Device Security and Forensics
 CSEC 470 Covert Communications

**Software Security:**
* SWEN 261 Introduction to Software Engineering
* SWEN 331 Engineering Secure Software
 CSEC 467 Mobile Device Security and Forensics
 CSEC 468 Risk Management for Information Security
 CSEC 731 Web Server and Application Security Audits (Graduate course)
 CSCI 622 Data Security and Privacy (Graduate course)
 CSCI 642 Secure Coding (Graduate course)
 SWEN 567 Hardware Software Co-Design for Cryptographic Applications

**Security Management and Evaluation:**
* CSEC 468 Risk Management for Information Security
* CSEC 477 Disaster Recovery Planning and Business Continuity
 CSEC 465 Network & System Security Audit
 CSEC 471 Penetration Testing Frameworks & Methodologies
 CSCI 531 Introduction to Security Measurement
 CSCI 532 Introduction to Intelligent Security Systems

**Electives:**
 CSCI 455 Principles of Computer Security
 CSCI 464 Xtreme Theory
 CSCI 531 Introduction to Security Measurement
CSCI 532 Introduction to Intelligent Security Systems
CSCI 622 Data Security and Privacy (Graduate course)
CSCI 642 Secure Coding (Graduate course)
CSCI 762 Advanced Cryptography (Graduate course)
CSEC 461 Computer System Security
CSEC 462 Network Security and Forensics
CSEC 464 Computer Systems Forensics
CSEC 465 Network & System Security Audit
CSEC 466 Introduction to Malware
CSEC 467 Mobile Device Security and Forensics
CSEC 468 Risk Management for Information Security
CSEC 469 Wireless Security
CSEC 471 Penetration Testing Frameworks & Methodologies
CSEC 473 Cyber Defense Techniques
CSEC 470 Covert Communications
CSEC 476 Malware Reverse Engineering
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