CYBERSECURITY (CYBR)

CYBR 345 - Introduction to Computer Security (3 Credits)
Prerequisite: CPSC 220. Co-requisite: CPSC 225. Provides an introduction to computer security. The focus is on providing the students a wide overview of current computer security. Topics covered include, but are not limited to, basic cryptography, network security, system security, wireless security and mobile security. In addition, course labs provide a more hands-on, in-depth exploration of specific topics.

CYBR 435 - Advanced Cybersecurity (3 Credits)
Prerequisite: CPSC 225, MATH 253, and CYBR 345. CYBR 435 explores more advanced cybersecurity related topics including but not limited to: Data security and forensics, component security, system security, and human security.

CYBR 445 - Software Security (3 Credits)
Prerequisite: CYBR 345. A course on the intersection of software and information security. A programming intensive course. Topics include but are not limited to: Programming flaws, causes, identification, exploitation and prevention; malicious software, development, identification, and prevention; software fuzzing and other flaw identification and testing methods.

CYBR 458 - Network Security (3 Credits)
Prerequisite: CYBR 345. Explores advanced network security topics and provides hands-on practice. Topics covered include, but are not limited to, network vulnerabilities, virtual LANs, firewall, access control, network anomaly detection and intrusion prevention, advanced network security algorithms and protocols, penetration test, network risk management, and security of the Internet of Things. Cross-listed as CPSC 458.

CYBR 461 - Cyber Certificate Studies : Ethical Hacking (3 Credits)
Prerequisite: CYBR 345 or MIST 411. Course prepares students for the Certified Ethical Hacker certificate exam while also covering practical aspects of understanding and defending against cybersecurity attacks.

CYBR 470 - Special Topics in Cybersecurity (1-4 Credits)
Prerequisite: Specified by Instructor. Treatment of selected topics in Cybersecurity. Most recently this has included topics such as Network Security, and Malware Analysis. May be repeated for credit with a change in topics.

CYBR 491 - Individual Study in Cybersecurity (1-4 Credits)
Prerequisite: Department Permission. Individual study in cybersecurity under the direction of a faculty member in an affiliated department.

CYBR 499 - Internship in Cybersecurity (1-4 Credits)
A supervised work experience in a sponsoring organization developed with, and under the supervision of, a department faculty member. Only 3 credits may count towards the major.