COMPUTER SCIENCE - CYBERSECURITY ENGINEERING EMPHASIS REQUIREMENTS (MS)

The Master of Science degree in Computer Science prepares students for leadership roles in the planning, development, testing, validation, and maintenance of software systems in a range of applied areas. Students in the program acquire a thorough understanding of the essential principles of modern computing, which provide a foundation for new discoveries in the field. Building on this foundation, students develop cutting-edge technical skills, strong problem analysis abilities, and project experiences that prepare them for careers in growing industries such as cloud computing, big data, cybersecurity, healthcare, biotechnology, advanced manufacturing, and financial services.

Code	Title	Units
Major Requirements - 30 units [1]		
COMPSCI 733	ADVANCED ALGORITHM DESIGN AND ANALYSIS	3
COMPSCI 750	SYSTEM AND SOFTWARE SECURITY	3
COMPSCI 755	CRYPTOGRAPHY AND SECURITY PROTOCOLS	3
CYBER 754	INTRUSION PREVENTION AND DETECTION	3
Select 6 units from:		**6**
COMPSCI 724	OPERATING SYSTEMS IN PRACTICE	
COMPSCI 732	MACHINE LEARNING	
COMPSCI 766	ADVANCED DATABASES	
COMPSCI 776	ADVANCED SOFTWARE ENGINEERING	
Select 6 units from:		**6**
CYBER 730	FUNDAMENTALS OF ETHICAL HACKING	
CYBER 740	CYBERSECURITY AND PRIVACY LAW	
CYBER 742	COMPUTER FORENSICS	
CYBER 747	EMBEDDED SYSTEM SECURITY	
CYBER 752	MALWARE REVERSE ENGINEERING	
CYBER 758	CLOUD SECURITY	
CYBER 759	TOPICS IN CYBERSECURITY	
Select 3-6 total units from: [2]		**3-6**
COMPSCI 789	CAPSTONE PROJECT [3]	
COMPSCI 799	THESIS RESEARCH [4]	
Total Units		**30**

1. Students pursuing the M.S. degree in Computer Science may declare either the applied research project option or the thesis option to fulfill their capstone requirement for graduation.
2. 30 units required to earn the master's degree. If only 3 units of capstone/thesis are taken, additional elective credits will be required. These elective credits may come from (1) any CYBER graduate course that is listed in this emphasis or (2) any COMPSCI graduate course.
3. Students who choose the applied research project option must earn at least 3 units of COMPSCI 789.
4. Students who choose the thesis option must earn at least 3 units of COMPSCI 799.