Cybersecurity, Graduate Certificate

The Graduate Certificate in Cybersecurity is a ~~six-course~~ four-course (~~18~~ 12 credit hours) multidisciplinary program ~~housed in the Graduate School. It is~~ designed to help students from all backgrounds achieve a foundation in information security. It provides students the flexibility to focus on technical and/or managerial aspects of computer, software, network, and information security. With primary courses offered by the Computer Science and Information Systems and Technology departments, the program also allows students to choose from a range of electives based on student interests. This certificate serves a broad group of managers, technical specialists, and professionals with a bachelor's degree. A prior background in information security is not required to enter this program.

Requirements

All students must take three required courses and ~~three electives~~ one elective ~~(at least one elective course must be in Computer Science)~~.

Required Courses

INFSYS 6828	Principles of Information Security	3
or CMP SCI 5702	Cyber Threats and Defense	
CMP SCI 4730	Computer Networks and Communications	3
or INFSYS 6836	Management of Data Networks and Security	
CMP SCI 5782	Advanced Information Security	3
or INFSYS 6858	Advanced Cybersecurity Concepts	

Electives

Choose ~~three~~ one of the following ~~(at least one must be a CMP SCI course)~~:		~~9~~ 3
CMP SCI 4700	Computer Forensics	

~~CMP SCI 4780~~	~~Computer and Network Security~~
~~CMP SCI 4792~~	~~Introduction to Mobile Computing, Networking, and Security~~
CMP SCI 5020	Android Apps: Android Fundamentals
CMP SCI 5222	Advanced iOS Apps
CMP SCI 5732	Cryptography for Computer Security
CMP SCI 5750	Cloud Computing
CMP SCI 5792	Mobile Computing, Networking, and Security
CMP SCI 5794	Security of IoT Systems
INFSYS 6830	Data Programming for Business Intelligence
INFSYS 6862	Artificial Intelligence Applications for Business and Cybersecurity
INFSYS 6864	Applied Cryptography for Business Applications
INFSYS 6866	Cloud Security Management
INFSYS 6868	Software Assurance
INFSYS 6878	Management of Information Security
Total Hours	**12**

~~Students may substitute the above courses with other courses upon approval by the graduate program director of either the Computer Science or Information Systems Department. In all cases, 18 hours are needed to complete the Graduate Certificate in Cybersecurity.~~ A maximum of two (2) 4000-level courses can be taken as part of the graduate certificate. A minimum of ~~four~~ three courses must be taken ~~in residence at~~ from UMSL.

Students may not receive both the Undergraduate and the Graduate Certificate in Cybersecurity.

For more information, students can contact the program directors at cybersecurityUMSL@umsl.edu.

Sign-offs from other departments affected by this proposal

Department	Contact Person	Phone #	Objections
S005150	Dinesh Mirchandani	7354	No

Rationale   Reducing all grad certificates to 12