MS in Cybersecurity

UMSL is a NSA/DHS National Center of Academic Excellence in Cyber Defense Education

College of Arts and Sciences

**Department of Computer Science**

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Master of Science in

# Cybersecurity - Computer Science Emphasis

The program will allow graduates to pursue high-demand work roles such as Cybersecurity Specialist, Cyber Defense Analyst, Cyber Defense Incident Responder, Information Security Analyst, Vulnerability Assessment Analyst, Security Architect, among a variety of other entry to mid-level cybersecurity and computing related roles. The Computer Science emphasis is housed on the department of Mathematics and Computer Science and it focuses on more technical aspects of the field.

The entire program can be completed in the evening, and students starting now will be able to complete the program online. Thirty credit hours (ten courses) are required for graduation. Applicants must meet the general graduate admission requirements of the Graduate School. Those with bachelor's degrees outside of cybersecurity or computer science must demonstrate significant proficiency as outlined in admission requirements using either prior coursework or experience. Applicants can be admitted with some deficiencies, which would need to be addressed by taking additional coursework. Applicants new to Computer Science and Cybersecurity are encouraged to take a few of the admission requirements courses  before reapplying.

Students can group elective courses of interest and earn one of the available certificates  with or without extra coursework.

| Required core courses | | Availability |
|---|---|---|
| CMP SCI 4730 | Computer Networks and Communications | O E  FP |
| CMP SCI 4760 | Operating Systems | O E  FP |
| or | | |
| CMP SCI 5710 | Modern Computing | E  FP |
| CMP SCI 5702 | Cyber Threats and Defense | O E  FP |
| CMP SCI 5732 | Cryptography for Computer Security | O    S |
| CMP SCI 5782 | Advanced Information Security | O    P |
| CMP SCI 5888 or 6900 | Cybersecurity Capstone, or related thesis | O  FP |
| **Additional Electives** | | |
| Four more courses, at least two in Cmp Sci, from a list of options. | | |

At most four total including core can be at the 4-thousand level.

For more info visit umsl.edu/cs or https://cybersecurity.umsl.edu. For careers visit umsl.edu/cs/careers. This document http://www.umsl.edu/cs/graduate-studies/MSCB_Flyer.pdf

**Availability:** Online (**O** O), Evening (**E** E), Summer (**S**), Fall (**F**), Spring (**P**)