



Bachelor 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, and Security Architect, among other entry to mid-level cybersecurity and computing-related roles. The Department of Computer Science offers this degree with an emphasis on computer science.

Students can complete the program online, with most courses available both in class and online. Students must also satisfy all [UMSL requirements for a BS](#) degree. Students can also choose to earn one of the available [certificates](#). In addition to university scholarships, the department awards annual [merit-based scholarships](#).

Required courses	Title	Availability
CMP SCI 1250	Introduction to Computing	SFP
CMP SCI 2250	Programming and Data Structures	SFP
CMP SCI 2261	Object-Oriented Programming	SFP
CMP SCI 2700	Computer Organization and Architecture	SFP
CMP SCI 2751	File Systems, Operations, and Tools	SFP
CMP SCI 3010	Web Programming	SFP
CMP SCI 3130	Design and Analysis of Algorithms	SFP
CMP SCI 3260	C/C++ for Advanced Programming	SFP
CMP SCI 3702	Cyber Threats and Defense	SFP
or INFSYS 3848	or Introduction to Information Security	FP
CMP SCI 3780	Software Security	FP
CMP SCI 4700	Computer Forensics	FP
CMP SCI 4730	Computer Networks and Communications	FP
CMP SCI 4732	Introduction to Cryptography for Computer Security	S
CMP SCI 4760	Operating Systems	FP
CMP SCI 4782	Information Security	P
CMP SCI 4794	Introduction to Security of IoT Systems	F
INFSYS 3868	Secure Software Development	FP
INFSYS 3878	Inf. Security Risk Management and Business Continuity	FP
MATH 1100	Basic Calculus	SFP
or MATH 1800	Analytic Geometry and Calculus I	SFP
MATH 1320	Introduction to Probability and Statistics	SFP
MATH 3000	Discrete Structures	SFP
ENGL 3120	Business Writing	SFP
or ENGL 3130	or Technical Writing	SFP

Additional electives

Three more courses from a [predefined list](#) – substitutions can be requested.

For more information visit umsl.edu/cs. For careers visit umsl.edu/cs/careers.

This document http://umsl.edu/cs/undergraduate-studies/BSCS_Flyer.pdf

Typical availability: Summer S Fall F Spring P