CYBERSECURITY MANAGEMENT CERTIFICATE

The Cybersecurity Management Certificate is designed to provide students with the technical and management skills necessary to work in the Cybersecurity field. Students will use Cybersecurity skills as a consultant or as an employee helping an organization to develop and implement a Cybersecurity program or respond to security incidents. Students will explore a variety of knowledge areas of Cybersecurity Management and apply that knowledge in a project in the capstone course. The curriculum is based on the Core Knowledge Units developed by the National Security Agency (NSA) and the Department of Homeland Security (DHS). Students will gain skills in programming; networking technology & protocols; databases & analytics; probability & statistics; policy, legal, ethics, and compliance; cybersecurity fundamentals & practices, and cybersecurity management & planning.

General Certificate Requirements

Additional requirements for graduation can be found on the Degree/Certificate Requirements for Graduation page (https://catalog.umt.edu/academics/graduation-requirements/).

Unless otherwise noted in individual program requirements, a minimum grade point average of 2.00 in all work attempted at the University of Montana-Missoula is required for graduation. Please see the Academic Policies and Procedures page (https://catalog.umt.edu/academics/policies-procedures/) for information on how your GPA is calculated.

Courses taken to satisfy the requirements of a major, minor, or certificate program must be completed with a grade of C- or better unless a higher grade is noted in the program requirements.

POST-SECONDARY CERTIFICATE - CYBERSECURITY MANAGEMENT

- This program requires a 3.0 GPA in the listed course requirements.

Course Requirements

Code	Title	Hours
Foundation Course: Network, Protocols, & Sys. Admin. Knowledge Pathway		
Complete one of the following courses:		3
BMIS 471	Fundamentals of Network & Security Management	
CSCI 466	Networks	
CSCI 476	Computer Security	
or CSCI 574	Computer Security	
ITS 214	Network OS - Infrastructure	
Programming & Scripting Knowledge Pathway		
Complete one of the following courses:		3
BMIS 365	Business App Development	
BMIS 465	Introduction to Real-time Data Analytics	
CSCI 150	Introduction to Computer Science	
CSCI 151	Interdisciplinary Computer Science I	
CSCI 152	Interdisciplinary Computer Science II	
CSCI 258	Web Application Development	
Databases, Analytics, & Statistics Knowledge Pathway		
Complete one of the following courses:		3
BMIS 326	Introduction to Data Analytics	
CSCI 232	Intermediate Data Structures and Algorithms	
CSCI 340	Database Design	
CSCI 444	Data Visualization	
Policy, Legal, Ethics, & Compliance Knowledge Pathway		
Complete one of the following courses:		3
ACTG 321	Accounting Information Systems I	
BGEN 220E	Business Ethics and Social Responsibility	
BGEN 361	Principles of Business Law	
CSCI 215E	Social & Ethical Issues in CS	
CSCI 315E	Computers, Ethics, and Society	
Cybersecurity Management & Planning Knowledge Pathway		
Complete one of the following courses:		3
BMIS 476	Integrated Project Management for IS	
BMIS 478	E Commerce: a Managerial Perspective	
BMIS 479	Introduction to Consulting	
BMIS 482	Big Data Project	
Capstone Course: Cybersecurity Fundamentals & Practices Knowledge Pathway		
Complete the following course:		
BMIS 472	Advanced Network & Security Management	3
Total Hours		**18**