Bachelor of Science in Cybersecurity (BSCS)

Our unique approach to teaching combines theory, practice, ethics, and professionalism in each course, as faculty bring extensive real-world experience into the classroom. Online discussion, readings, and activities are often augmented with outside technology experts and virtual labs. In many courses, student projects involve solving technology problems and providing information technology services to actual real-world organizations. Additionally, all students have the opportunity to interact with cybersecurity professionals and can choose to complete a series of cybersecurity internships prior to graduation. These internships can lead to permanent employment opportunities.

Montreat College has been designated by the National Security Agency and the Department of Homeland Security as a National Center of Academic Excellence in Cyber Defense Education. This designation is reflected on the transcripts of students completing the Bachelor of Science in Cybersecurity.

Requirements for the B.S. in Cybersecurity

Degree Components:
Completion of Bachelor General Education Core (39 credits) CYBR 1131, BUSN 3502, and MATH 1210 are required in the Gen-Ed Completion of the Cybersecurity Major Courses (60 credits)
Completion of electives to reach 120 credits

Bachelor of Science in Cybersecurity Courses

Course	Title	Cr
BUSN	Business Elective	3
CYBR 1115	Introduction to Cybersecurity	3
CYBR 1121	Introduction to Operating Systems*	3
CYBR 1211	Introduction to Computer Programming*	3
CYBR 2212	Intro to Secure Scripting*	3
CYBR 2213	Database Programming*	3
CYBR 2221	Intro to Computer Networking*	3
CYBR 2222	Network Defense*	3
CYBR 2311	Computer and Systems Security*	3
CYBR 2333	Principles of Cyber Defense	3
CYBR 3312	Principles of Cybersecurity*	3
CYBR 3321	The 3 C's: Cybercrime, Cyber Law and Cyber Ethics*	3
CYBR 4523	Advanced Cyber Defense	3
CYBR 4541	Penetration Testing*	3
CYBR 4542	Incident Response and Contingency Planning	3
CYBR 4073 **OR** CYBR 4643	Adv. Cyber Internship and Senior Project (90 clock hours: 16 weeks) **OR** Capstone Project	3
	Cybersecurity Electives	12
TOTAL		**60**

*Center of Academic Excellence Mapped Courses

If students take a full-time load each term, they could complete this program in four years.

Cybersecurity Electives (Select 12 credits)

Course	Title	Cr
CYBR 1141	Information Technology for Managers	3
CYBR 2080	Special Topics – Investigating Cybercrime	3
CYBR 2122	Linux Operating Systems and Security	3
CYBR 2334	Introduction to Digital Forensics	2
CYBR 3313	Certification Study and Preparation	3
CYBR 4511	GRC: Cybersecurity Risk Management	3
CYBR 4512	GRC: IT/Cybersecurity Audit & Compliance	3
CYBR 4531	Introduction to Cloud Security	3
CYBR 4543	System Forensics	3
CYBR 4551	Introduction to Data Science in Cybersecurity	3
DATA 1552	Data Analytics Tools	3
DATA 2552	Applied Statistics for Data Analytics	3
DATA 2553	Data Structures and Algorithms	3
DATA 3553	Dataset Organization, Reporting, and Management	3
DATA 3554	Introduction to Data Mining, Machine Learning, and AI	3
DATA 3555	Artificial Intelligence Fundamentals for Cybersecurity	3
DATA 4552	Introduction to Big Data	3

Minor in Artificial Intelligence (AI)

Degree Components:

Completion of Bachelor General Education Core (39 credits)
Completion of the Cybersecurity Major Courses (45 credits)
Completion of the Artificial Intelligence Minor Courses (18 credits)
Completion of electives to reach 120 credits

Minor in Artificial Intelligence (AI) Courses

Course	Title	Cr
MATH 1110 Or MATH 1130	Intro to Mathematical Concepts Mathematics for Management	3
DATA 1552	Data Analytics Tools	3
DATA 2553	Data Structures and Algorithms	3
DATA 3554	Introduction to Data Mining, Machine Learning, and AI	3
DATA 3555	Artificial Intelligence Fundamentals for Cybersecurity	3
CYBR 4512	GRC: IT/Cybersecurity Audit & Compliance	3
TOTAL	Required Minor Credits	18

*Center of Academic Excellence Mapped Courses