BACHELOR OF APPLIED SCIENCE DEGREE IN CYBERSECURITY

Overview

The **Bachelor of Applied Science in Cybersecurity (BAS–Cybersecurity)** degree is designed for students seeking to advance their careers in cybersecurity and information technology. The curriculum builds on foundational technical skills and includes advanced coursework in cybersecurity, networking, systems, and risk management to prepare students for upper-division study and professional roles in the field.

The BAS–Cybersecurity degree is a workforce-focused program that emphasizes practical, applied learning and prepares students for careers in areas such as information security, network defense, and cybersecurity analysis.

Students are encouraged to work with an advisor to ensure appropriate course selection and program planning based on their educational background and career goals.

Refer to the tabs above for additional information about:

- **Requirements** – outlines all courses required for completion of the degree
- **Education Plan** – provides a sample term-by-term sequence of courses
- **How to Apply** – details the steps required to apply to the program
- **Career Info** – includes information on potential occupations, employment trends, and earnings

Program Requirements

The degree requirements below outline the courses and credit categories required to complete the **Bachelor of Applied Science in Cybersecurity (BAS–Cybersecurity)** degree, including upper-division coursework and general education requirements. Expand each section to view courses that fulfill specific program requirements.

For a suggested term-by-term sequence, refer to the **Education Plan** tab.

The Bachelor of Applied Science in Cybersecurity (BAS–Cybersecurity) degree requires a minimum of **180 total credits**. These credits are typically completed through a combination of:

- **Lower-division prerequisite coursework (approximately 45 credits)**
- **Additional lower-division coursework or electives (approximately 45 credits, as needed)**
- **Upper-division BAS program requirements (90 credits)**

The tables below outline the prerequisite and upper-division coursework required for this program. Additional lower-division credits may vary based on prior coursework or transfer credits.

Prerequisites

Code	Title	Credits
Cybersecurity Core - 10 courses		**36**
CIS151	Introduction to Networks	
or ISTM151N	Preparation for Network+	
CIS284S	Preparation for Security+	
ISTM133P	Introduction to Python	
ISTM140L	Preparation for Linux	
ISTM183A	Preparation for A+ Essentials	
ISTM183B	Preparation for A+ Practical Application	
ISTM183C	Fundamentals of CyberSecurity	
ISTM233P	Python for Cyber Security	
ISTM279A	Windows Server (Azure)	
ISTM283F	Practical Digital Forensics	
Mathematics - 1 course		**5**
Written Communication - 1 course		**4**
Combination of lower division transfer and CTE courses to total 180 applicable degree credits		**45**
Elective courses must be 100-level or above		
Total Credits		**90**

BAS Requirements:

Code	Title	Credits
Computer Science - 2 courses		**8**
CS161	Computer Science I	
CS162	Computer Science II	
Information Science & Technology Management - 19 courses		**67**
ISTM284E	Ethical Hacking	
ISTM300	Issues in Cybersecurity	
ISTM310	Cyber Defense Strategies	
ISTM315	Cyber Offense Strategies	
ISTM320	Digital Forensics and Incident Response	
ISTM321	Mobile Forensics	
ISTM322	Critical Infrastructure	
ISTM323	Practical Malware Analysis	
ISTM330	Cybersecurity Compliance	
ISTM331	Risk Analysis	
ISTM333	Identity and Access Management (IAM)	
ISTM340	Artificial Intelligence	
ISTM345	Assembly Language for Cybersecurity	
ISTM346	Secure Programming	
ISTM350	Preparation for Cybersecurity Analyst	
ISTM380	Cyber Competition Alpha	
ISTM381	Cyber Competition Bravo	
ISTM431	Information Technology Project Management	
ISTM490	Senior Project	
Business - 2 courses		**7**
BA205	Business Communications	
BA285	Leadership and Human Relations	
Mathematics - 1 course		**4**
MTH111Z	Precalculus I: Functions	
or MTH105Z	Math in Society	
Written Communication - 1 course		**4**
WR227Z	Technical Writing	
Total Credits		**90**

Education Plan

This sample Education Plan illustrates one possible course sequence. Students should consult an advisor (https://www.mhcc.edu/student-resources/academic-advising/) to create a personalized plan.

The BAS in Cybersecurity is designed so students may begin any term.

To be successful in the BAS Cybersecurity program, students need to have completed the following prerequisite courses or their equivalents before starting any of the 300/400 level courses.

See a Cybersecurity Faculty Adviser before enrolling to determine if you need to take any additional prerequisites.

Prerequisites		Credits
MTH095 or MTH098	Intermediate Algebra with Right Triangle Trigonometry or Quantitative Reasoning II	5
WR121Z	Composition I	4
CIS151 or ISTM151N	Introduction to Networks or Preparation for Network+	4
ISTM183A	Preparation for A+ Essentials	3
ISTM183B	Preparation for A+ Practical Application	3
ISTM183C	Fundamentals of CyberSecurity	3
ISTM133P	Introduction to Python	4
ISTM140L	Preparation for Linux	4
ISTM233P	Python for Cyber Security	4
ISTM279A	Windows Server (Azure)	4
ISTM283F	Practical Digital Forensics	3
CIS284S	Preparation for Security+	4
	Credits	**45**
	Total Credits	**45**

Students may begin in fall, winter, or spring term.

General education courses (such as math, writing, health, etc.) can be taken during any term, or before starting the program.

First Quarter		
Fall		**Credits**
CS161	Computer Science I	4
ISTM284E	Ethical Hacking	3
ISTM300	Issues in Cybersecurity	4
ISTM310	Cyber Defense Strategies	3
MTH111Z or MTH105Z	Precalculus I: Functions (or higher) or Math in Society	4
	Credits	**18**
Second Quarter		
Winter		
CS162	Computer Science II	4
ISTM320	Digital Forensics and Incident Response	4
ISTM331	Risk Analysis	4
WR227Z	Technical Writing	4
	Credits	**16**
Third Quarter		
Spring		
ISTM321	Mobile Forensics	4
ISTM322	Critical Infrastructure	4
ISTM345	Assembly Language for Cybersecurity	4
ISTM380	Cyber Competition Alpha	2
	Credits	**14**
Fourth Quarter		
Fall		
BA285	Leadership and Human Relations	3
ISTM315	Cyber Offense Strategies	3
ISTM340	Artificial Intelligence	4
ISTM350	Preparation for Cybersecurity Analyst	4
	Credits	**14**
Fifth Quarter		
Winter		
BA205	Business Communications	4
ISTM330	Cybersecurity Compliance	4
ISTM333	Identity and Access Management (IAM)	4
ISTM431	Information Technology Project Management	3
	Credits	**15**
Sixth Quarter		
Spring		
ISTM323	Practical Malware Analysis	4
ISTM346	Secure Programming	4
ISTM381	Cyber Competition Bravo	2
ISTM490	Senior Project	3
	Credits	**13**
	Total Credits	**90**

How to Apply

Students interested in the Cybersecurity BAS program should review the following pathways for eligibility.

You may be eligible to enroll in this program if you meet one of the following:

- **Completed the AAS in Cybersecurity** (Networking and Security Operations (https://catalog.mhcc.edu/programs-majors/cybersecurity-networking-security-degree/) or Penetration Testing (https://catalog.mhcc.edu/programs-majors/cybersecurity-penetration-testing/)) at MHCC
- **Completed an AAS or AS degree in a related field**, such as Information Technology, Computer Science, Computer Information Systems, or Cybersecurity, at MHCC or another institution
  - Official transcripts must be submitted for evaluation to determine course equivalency
- **Completed an AAS, AS, or bachelor's degree** and have relevant industry experience or industry certifications
  - Transcripts must be submitted for evaluation
  - Industry experience and/or certifications may be reviewed for credit for prior learning and course equivalency
- **Completed at least 90 college-level credits** (courses numbered 100 or above) and met program prerequisites

If you have questions about eligibility, prerequisites, or the application process, students are encouraged to connect with an advisor (https://www.mhcc.edu/student-resources/academic-advising/) for guidance.

Career Information

Explore potential careers related to this program, including typical job roles, employment trends, and projected growth. This information can help you better understand how your education may align with future career opportunities.

★ Course offered online
Cultural Literacy course