

CYBERSECURITY: BACHELOR OF APPLIED SCIENCE

Bachelor of Applied Science Degree Program

Faculty Advisers

Dr. Wayne Machuca: 503-491-7631 | Room AC2776 | Wayne.Machuca@mhcc.edu

Katrinia McNeal: 503-491-7502 | Room AC2683 | Katrinia.McNeal@mhcc.edu

Dr. Dustin Bessette: 503-491-7424 | Room AC2786 | Dustin.Bessette@mhcc.edu

Jeff Sperley: 503-491-7357 | Room AC2783 | Jeff.Sperley@mhcc.edu

According to the United States Cybersecurity & Infrastructure Security Agency, cybersecurity is the art of protecting networks, devices, and data from unauthorized access or criminal use, and the practice of ensuring confidentiality, integrity, and availability of information.

It seems that everything relies on computers and the internet now—communication (email, smartphones, tablets), entertainment (interactive video games, social media, apps), transportation (navigation systems), online shopping, credit cards, medicine (medical equipment, medical records), and the list goes on. How much of your daily life relies on technology? How much of your personal information is stored either on your own computer, smartphone, tablet or on someone else's system?

The Bachelor of Applied Science in Cybersecurity (BAS) at MHCC is designed to provide a deeper and richer foundation in cybersecurity to meet the demands of the industry.

- **Students who completed an AAS in Cybersecurity from MHCC are automatically eligible to enroll in the BAS degree program.**
- **Students from other colleges who completed a degree in cybersecurity, information technology, computer science, or other related fields are also invited to enroll.**

Program Outcomes

At the completion of this program, students should be able to:

- Utilize access management systems appropriate for small to medium-sized businesses.
- Discuss the rules, laws, policies, and procedures as related to cybersecurity; identify and differentiate compliance requirements specific to Critical Infrastructure organizations and others.
- Actively monitor a given environment using a range of deployed alerting tools; justify the implementation of appropriate algorithms to solve problems, and implement that solution.
- Define steps in a forensic investigation and identify various tools used to recover evidence; perform a forensic investigation utilizing various tools; analyze results and propose, approve, and implement strategies to improve security.
- Practice using appropriate project management tools, including tools for data gathering, data analysis, data representation, decision-making, and communication with internal and external stakeholders.

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

Students who have not already completed the following courses (or equivalent from another college) should complete these in their first term, before starting the applied baccalaureate courses. See a Cybersecurity Faculty Adviser before enrolling to determine if you need to take any additional prerequisites.

Code	Title	Credits
MTH095	Intermediate Algebra with Right Triangle Trigonometry ★	5
or MTH098	Quantitative Reasoning II	
WR121Z	Composition I ★	4

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		Credits
Fall		
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
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	Credits	15
Sixth Quarter		
Spring		
ISTM323	Computer Architecture for Cybersecurity ★	4
ISTM346	Secure Programming ★	4
ISTM381	Cyber Competition Bravo ★	2
ISTM490	Senior Project ★	3
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	Credits	13
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	Total Credits	90

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