

Business Cybersecurity Management, M.S.

Degree Offered

- Master of Science in Business Cybersecurity Management

Certificates Offered

- Business Cybersecurity Data Analytics
- Business Cybersecurity Foundations
- Business Cybersecurity Management

Nature of the Program

The M.S. in Business Cybersecurity Management Program is a 12-month or 24-month online program. The online course delivery of this program allows students to work in teams with expert faculty conducting hands-on technical labs, learning complex technologies while working with a flexible schedule and location independence.

This Business Cybersecurity Data Analytics certificate orients both data and technology analysts to the demands and requirements of both securing and analyzing data. The Business Cybersecurity Foundations certificate focuses on the development of a new or overhaul of existing cybersecurity structures in firms of all sizes. The Business Cybersecurity Management certificate prepares students to manage and improve existing cybersecurity programs with an emphasis on the evaluation of risks and where cybersecurity management meets the law.

Although the master's and certificate programs require the learning of challenging technical material, entry into the program does not assume or require depth in technology fields. The program is constructed in such a way as to allow students from all backgrounds to get up to speed quickly, while simultaneously challenging those with deep technical expertise.

Academic Standards

In addition to the University's academic and professional standards (<http://catalog.wvu.edu/graduate/enrollmentandregistration/>), students enrolled in a John Chambers College of Business and Economics master's degree program must also abide by the following standards:

- Students must have a minimum cumulative GPA of 3.0 to earn a degree from their graduate program, without exception.
 - A student who cannot mathematically meet the 3.0 GPA requirement to successfully complete the degree, within a reasonable period of time (as defined by the Program Coordinator or designee), will be dismissed from their academic program. Visit the Probation, Suspension, and Dismissal (<http://catalog.wvu.edu/graduate/enrollmentandregistration/#probationsuspensionanddismissal>) section of the University's Graduate Catalog for more information about this topic.
- Students must follow the professional standards established by the college, their degree program and/or department. A student who violates the established professional standards may be placed on probation, suspended, or dismissed from their program.
- A student whose cumulative GPA falls below 2.75 will automatically be placed on academic probation.
 - A student will be dismissed from their program if their GPA is not raised to 2.75 by the end of their subsequent semester of enrollment.
- A student will be dismissed from their program if they earn a letter grade below C- in more than one required course.
- A student who earns a letter grade of D or F in any required course must repeat the course and earn a minimum letter grade of C-.
 - Any grade earned in a repeated course at the graduate level is included in the calculation of a student's overall and major GPA, along with the original grade earned in the course. Additionally, the original grade earned in the course will remain on the student's academic transcript/permanent record. Visit the Grades (http://catalog.wvu.edu/graduate/advisingcoursesdegrees/advising_and_evaluation/#gradestext) section of the University Graduate Catalog for more information about this topic.

Any exceptions to the above standards must be approved in writing by the Associate Dean for Graduate Programs **and** the Program Coordinator.

FACULTY

COORDINATOR

- Christopher Ramezan - Ph.D. (West Virginia University)
Security Architecture, Machine Learning, IT/OT Convergence, Remote Sensing, Cybersecurity Education

TEACHING ASSISTANT PROFESSORS

- Mohammad J. Ahmad - Ph.D. (West Virginia University)
Software Vulnerability and Fault-Proneness Detection, Analysis, and Classification, Machine Learning, Software Engineering, Cybersecurity

ADJUNCT PROFESSORS

- Lydia Greaser - M.S. (West Virginia University)
Director of HSC Information Security, West Virginia University Health Sciences Center
- Frank Hatten - M.S. (West Virginia University)
Cybersecurity Analyst, John Chambers College of Business and Economics
- John Lympany - Ed.D. (Spalding University)
Assistant Dean for Administration and Planning, John Chambers College of Business and Economics

Admissions for 2025-2026

The M.S. in Business Cybersecurity Management program seeks individuals from diverse academic backgrounds who have an interest and aptitude to be successful in the cybersecurity domain. This program prepares students to become cybersecurity professionals, as well as sharpen the skills of those who currently work in the cybersecurity industry so that they can adapt to growing changes in security technology.

The Admissions Committee will take a holistic approach to the application review process and will consider the strength of the following admissions application requirements:

- GPA - To be competitive, an applicant would present a cumulative undergraduate GPA of 3.25
- Resume
- Statement of Purpose
- Letter of Recommendation - Applicants must have one letter of recommendation from an individual who is not a friend or family member and can provide information about their ability to work with others, discipline and ambition, leadership potential, etc.

The Admissions Committee reviews applications on a rolling basis, and students admitted to the program may begin in the fall or spring semester. Please visit this program's webpage (<https://business.wvu.edu/academics/management-information-systems/business-cybersecurity-management/>) to learn more about the specific application deadlines and other important information. Students may also contact the John Chambers College of Business and Economics Graduate Programs Office for assistance at (304) 293-5505.

* Note- International Students are required to submit a TOEFL, IELTS, or Duolingo score. Applicants must have a TOEFL-ibt score of 79. If you have taken the IELTS, the minimum score must be 6.5, and the minimum Duolingo score is a 105. English language exam scores should be sent to the Office of Admissions, West Virginia University, PO Box 6009, Morgantown, WV 26506-6009.

Major Code: 2140

All graduate programs in the John Chambers College of Business and Economics require that enrolled students maintain a minimum cumulative GPA of 3.0 in coursework applied toward their degree program, as outlined in the specific academic program of study.

Degree Requirements

Each student who completes an MS in Business Cybersecurity Management will complete a 10 course online sequence in a one year time period. Students are required to attend an on-campus residency and also are required to attend an on-campus residency to present their capstone project at the conclusion of their one year program.

Code	Title	Hours
A program GPA of 3.0 is required by the Chambers College.		
CYBR 510	Cybersecurity Information Systems Management	3
CYBR 515	Software Security	3
CYBR 520	Business Cybersecurity Analytics	3
CYBR 525	Information Security Assurance Management	3
CYBR 530	Business Data Communications	3
CYBR 535	Business Network Security *	3
CYBR 540	Information Ethics and Legal Procedures **	3
CYBR 545	Business Cybercrime Management	3
CYBR 550	Business Enterprise Security Architecture	3
CYBR 555	Business Cybersecurity Practicum	3
Total Hours		30

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Students may select CPE 538 in place of the CYBR 535 in the Spring semester, on campus.

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Students may select CS 539 in place of the CYBR 540 in the Spring semester, on campus

Suggested Plan of Study - 1 Year

First Year

Fall	Hours	Spring	Hours	Summer	Hours
CYBR 510		3 CYBR 535		3 CYBR 515	3
CYBR 520		3 CYBR 540		3 CYBR 555	3
CYBR 525		3 CYBR 545		3	
CYBR 530		3 CYBR 550		3	
		12			6

Total credit hours: 30

SPRING START - 18 MONTH

First Year

	Spring	Hours	Summer	Hours
	CYBR 535		3 CYBR 515	3
	CYBR 540		3	
		6		

Second Year

Fall	Hours	Spring	Hours	Summer	Hours
CYBR 510		3 CYBR 545		3 CYBR 555	3
CYBR 520		3 CYBR 550		3	
CYBR 525		3			
CYBR 530		3			
		12			6

Total credit hours: 30

FALL START - 2 YEAR

First Year

Fall	Hours	Spring	Hours	Summer	Hours
CYBR 525		3 CYBR 535		3 CYBR 515	3
CYBR 530		3 CYBR 540		3	
		6			6

Second Year

Fall	Hours	Spring	Hours	Summer	Hours
CYBR 510		3 CYBR 545		3 CYBR 555	3
CYBR 520		3 CYBR 550		3	
		6			6

Total credit hours: 30

Major Learning Outcomes

BUSINESS CYBERSECURITY MANAGEMENT

Upon completion of this program, students will:

- Students will be able to demonstrate managerial expertise in understanding and investigating complex cybersecurity ideas.
- Students will be able to evaluate the data security of businesses from a data and systems security perspective, and to recommend and initiate appropriate procedures, policies, and security controls to ensure improved data and systems security.
- Students will be able to use appropriate tools to mitigate cybersecurity threats by applying knowledge of topics such as risk management, disaster recovery, business continuity, digital forensics, and computer network defenses.

4 *Business Cybersecurity Management, M.S.*

- Students will be able to communicate the analysis and findings of a comprehensive security audit initiative to enhance the protection and security of an organization.