

# CYBERSECURITY (B.S.)

The Bachelor of Science in Cybersecurity provides students with the fundamental knowledge and skills of data analytics to protect computer systems, networks, and sensitive information from the growing threat of cyberattacks. The program offers a rigorous curriculum covering various cybersecurity topics, from computer network and software system security, cybercrime, and societal and human security in organizations, to threat detection with applied machine learning techniques. Through theoretical knowledge and practical hands-on experience, our students will develop the expertise needed to analyze cybersecurity risks, develop solutions to protect against them, and respond to security breaches when they occur. As technology becomes more integrated into our lives, the demand for cybersecurity experts rapidly increases. This program prepares students for rewarding and in-demand careers in this exciting field.

## Integrative Studies Requirements

40 credits minimum

Code	Title	Credits	Completed
<b>Major Requirements (56 credits)</b>			
<i>Foundational Math, Statistics, and Computer Programming Core</i>			
MATH-135	Discrete Mathematics for CS	4	_____
MATH-141	Introductory Statistics	4	_____
ISCS-210	Python Programming	4	_____
<i>Cybersecurity Core</i>			
CS-215	OS Administration	4	_____
CJS-250	Homeland Security	4	_____
IICS-350	Cybercrime	4	_____
CS-355	Computer Networks	4	_____
CS-455	Crypt & Network Security	4	_____
<i>Data Analytics Core</i>			
IIPHYS-342	Data Analysis for Scientists	4	_____
ISMGT-383	Applied Data Analysis & Vis	4	_____
CS-480	Machine Learning	4	_____
<i>Societal and Human Security Core</i>			
ISCJS-101	Intro Criminal Justice Studies	4	_____
IIECON-310	Game Theory	4	_____
<i>Societal and Human Security Related Elective</i>			
Select <b>one</b> of the following:		4	_____
IICOMM-110	Information and Media Literacy		_____

COMM-385	Digital Comm Law & Ethics	_____
MGT-380	Project MGT Fundamentals <sup>1</sup>	_____
MGT-381	Mgt Information Systems <sup>1</sup>	_____
ISPOSC-318	Law and Policy	_____
POSC-324	International Law	_____
<b>Total Credits</b>		<b>56</b>

<sup>1</sup> MGT-380 Project MGT Fundamentals and MGT-381 Mgt Information Systems have additional Prerequisites.

It is strongly recommended for students to consider participating in either CS-297 Internship or CS-497 Advanced Internship.

## Electives

Select courses to reach a total of 120 credits for the degree.

## Degree Requirements

120 credits

40 credits at the upper-level

## Upon completion of the Cybersecurity B.S. degree, students will be able to:

- Apply computing principles and other relevant disciplines to analyze a complex computing problem and identify its solutions.
- Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
- Communicate effectively in a variety of professional contexts.
- Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
- Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
- Apply security principles and practices to maintain operations with risks and threats.