

ARTIFICIAL INTELLIGENCE FOR CYBERSECURITY (ADV CERT)

Requirements

The curriculum consists of five courses (two required core and three electives) spanning two to four semesters, resulting in a 15-credit advanced certificate in artificial intelligence for cybersecurity.

Course	Title	Credits
CISC 5450	Mathematics for Data Science	3
CISC 5500	Data Analytics Tools and Scripting	3
CISC 5900	Information Fusion	3
CISC 5950	Big Data Computing	3
CISC 6525	Artificial Intelligence	3
CISC 6745	Data Visualization	3

Prerequisites

Cybersecurity

Students are expected to enter the advanced certificate program with a basic knowledge of cybersecurity equivalent to CISC 5650 Cybersecurity Essentials. Alternatively, students must complete CISC 5650 prior to completing the advanced certificate or before taking any courses that require this course as a prerequisite.

Computer Programming

All students are expected to have some knowledge of computer programming, as assessed by a Python examination. Those with insufficient background must take CISC 5380 Programming with Python.

Curriculum

Course	Title	Credits
Required Courses		
CISC 5660	Data Science for Cybersecurity	3
CISC 6670	Artificial Intelligence for Cybersecurity	3
Electives		
One Cybersecurity-Focused course ¹		3
One Data Science-Focused course ¹		3
One Cybersecurity or Data Science-Focused course		3
Total Credits		15

¹ See below lists of courses fulfilling each requirement.

Cybersecurity-Focused courses

Courses in this group have the DCCF attribute.

Course	Title	Credits
CISC 6600	Cloud Computing Security	3
CISC 6640	Privacy and Security in Big Data	3
CISC 6660	Applied Cryptography	3
CISC 6800	Malware Analytics and Software Security	3
CISC 6880	Blockchain Technology	3

Data Science-Focused courses

Courses in this group have the DCDF attribute.