

## B.S. Cybersecurity - Four Year Degree Completion Guide (Spring 2022 - Current)

The highlighted cells indicate General Education Courses for *B.S. Cybersecurity*

The minimum credits required for graduation: 120

Year 1			Credits
Fall	IGED 110	Foundation Writing I	3
	IGED 130	Foundation Oral Communication	3
	APCT 110/111	Intro to Programming (Lec+Lab)	3
	CYSE 100	Introduction to Information Security and Assurance	3
	CYSE 130	IT Systems Component Security	3
	Sub-total		
Spring	IGED 111	Foundation Writing II	3
	MATH 185	Elementary Statistics I	3
		Natural Science Elective (Lec+Lab)	4
	APCT 231/233	Computer Science I (Lec+Lab)	4
	CYSE 110	Ethics in Cybersecurity and Cyber Law	3
	Sub-total		

Year 2			Credits
Fall	IGED 140	Foundation Ethics	3
	IGED 210	Discovery Writing	3
	MATH 220	Discrete Math	3
	APCT 232/234	Computer Science II (Lec+Lab)	4
	CYSE 210	Computer Data Communication, Networking Protocols and Management	3
	Sub-total		
Spring	IGED 270	Discovery Diversity	3
		Natural Science Elective (Lec+Lab)	4
	CSCI 241	Data Structures	3
	CYSE 220	Introduction to Cryptography	3
	CYSE 230	Introduction to Computer and mobile Forensics	3
	Sub-total		

CS Elective+

Course number	Title	New Credits
CSCI 308	Advanced Object-Oriented Programming	3
CSCI 315	Unix and System Programming	3
CSCI 341	Software Engineering	3
CSCI 342	System and Network Administration	3
CSCI 343	Database Administration	3
CSCI 345	Human Computer Interaction	3
CSCI 410	Theory of Computing	3
CSCI 412	Introduction to Operating Systems	3
CSCI 434	Analysis of Algorithm	3
CSCI 452	Database Management Systems	3

Year 3			Credits
Fall	IGED 280	Discovery Civics	3
	CYSE 275	Principles of Cybersecurity and Security Management	3
	CYSE 310	Cybersecurity Planning, Operations, and Incident Response Management	3
	CSCI 352	Network Security	3
		CS Elective+	3
	Sub-total		
Spring	CYSE 320	Reverse Engineering and Malware Analysis	3
	CSCI 414	Introduction to Artificial Intelligence	3
	CSCI 412	Operating Systems	3
		Cybersecurity Elective+	3
		CS Elective+	3
	Sub-total		

Year 4			Credits
Fall	CYSE 440	Principle and Practices of Network Defense and Applied Network Security Monitoring	4
	CYSE 465	Advanced Cryptography	3
	CYSE 430	Secure Software Engineering	3
	CYSE 498	Cybersecurity Capstone I	3
	Sub-total		
Spring	CYSE 410	Threat Intelligence and Cyber Defense	3
	CYSE 420	Cloud Computing Security and Challenges	4
		Cybersecurity Elective+	3
	CYSE 499	Cybersecurity Capstone II	3
Sub-total			13

Cybersecurity Elective+

Course number	Title	New Credits
CYSE 355	Cybersecurity Tools and Risk Management	3
CYSE 435	Securing Cyber Physical System	4
CYSE 455	Cybersecurity and Artificial Intelligence	3
CYSE 470	Mobile Device and Wireless Security	3
CYSE 480	Advanced Information Security Assurance and Risk Control	
CYSE 460	Special Topic in Cybersecurity (Independent Research Study)	3