CYBERSECURITY, ASSOCIATE OF SCIENCE DEGREE

Banner Code: 3_AS_CYBR2
Control Number: 20382
Financial Aid Eligible

The courses in this program provide students with a solid foundation in the tools, techniques, and procedures used by cybersecurity professionals. The program is designed to prepare students with the knowledge of emerging trends in cybersecurity and the skills needed for an entry-level career or advancement. Provides preparation for careers such as Cybersecurity Specialist, Information Security Analyst, Cyber Crime Analyst, Incident and Intrusion Analyst, and Vulnerability Analyst for a variety of industries including manufacturing, national security, finance, insurance, and health care. Topics include computer networking fundamentals, computer and network security, ethical hacking principles and methodology, digital forensics techniques, introductory programming, server administration, and security policies and procedures to build cyber resilience. The program courses include hands-on and technical writing assignments to help students develop in-demand skills for the cybersecurity workforce.

Program Level Student Learning Outcomes

Upon completion of this program, students will be able to:

1. Evaluate and communicate the human role in security systems with an emphasis on ethics, social engineering vulnerabilities, and training.
2. Assess security risks and identify methods to minimize their threat and/or impact.
3. Demonstrate the ability to locate technical resources to resolve security-related issues with networking hardware and software.
4. Apply risk management concepts to develop policies and procedures following security best practices.

Review Graduation Requirements (https://catalog.cccd.edu/coastline/graduation-requirements/associate-degree/) and General Education (https://catalog.cccd.edu/coastline/general-education/).

Course	Title	Units
Required Core		
Complete the following:		
CYBR C101	Introduction to Cybersecurity	3
CST C128	Computer Networking Principles (Network +)	3
CST C158	Contemporary Operating Systems (Server+)	3
CIS C157	Introduction to Python Programming	3
Program Electives		
Select three courses of the following specialized areas:		9
CYBR C132	Introduction to Ethical Hacking	
CYBR C150	Introduction to Digital Forensics	
CYBR C160	Introduction to Incident Response	
CYBR C170	Cybercrime and CSIRT Coordination	
CYBR C225	Cybersecurity Governance, Risk, and Compliance	

Course	Title	Units
CYBR C227	Cyber-Physical Security: Protecting Critical Infrastructure	
CYBR C230	Network Security (Security+)	
CYBR C234	Web Application Security	
CYBR C242	Vulnerability Assessment (PenTest+)	
CYBR C250	Intermediate Digital Forensics	
CYBR C255	Cybersecurity Analyst (CySA+)	
CYBR C256	Mobile Device Forensics	
CYBR C260	Intermediate Incident Response	
CYBR C270	Certified Information Systems Security Professional	
CYBR C271	Become a Security Consultant	
CYBR C280	Advanced Digital Forensics & Incident Response Capstone	
CYBR C291	CompTIA Advanced Security Practitioner	
CST C191A	Linux Operating System Principles (Linux+)	
Units Required for Major		**21**

Requirement	Units
Local General Education, CSU General Education, or IGETC pattern	Varies
Electives to satisfy unit requirement	Varies
Total Units for Degree	60

Cybersecurity Degree Program Maps

These program maps are recommended examples of all major (program) requirements as well as general education requirements for two-year completion or transfer. These paths may be altered to fit your individual academic needs. These two-year program maps were created by program faculty and counselors and demonstrate recommended paths to completion. **Students are advised to meet with a Coastline Counselor for individualized program planning.**

Your Path to Success

Follow one of the paths to earn your degree in Cybersecurity in 2 years.

Don't forget to consult a counselor for an education plan!

Path 1 (Cybersecurity Analyst)

Course	Title	Units
1st Semester		
ENGL C100	Freshman Composition	4
MATH C160	Introduction to Statistics	4
CMST C101	Fundamentals of Human Communication	3
CYBR C101	Introduction to Cybersecurity [*]	3
CST C158	Contemporary Operating Systems (Server +) [*]	3
2nd Semester		
HIST C175	United States History since 1876	3
PSYC C100	Introduction to Psychology	3
ART C101	Survey of Art: Renaissance to Contemporary	3
CIS C157	Introduction to Python Programming [*]	3
CST C128	Computer Networking Principles (Network +) [*]	3

Course	Title	Units
3rd Semester		
BIOL C100	Introduction to Biology	3
ENGL C102	Critical Reasoning, Reading, and Writing	3
PHIL C120	Ethics	3
CYBR C132	Introduction to Ethical Hacking	3
or CYBR C160	Introduction to Incident Response	
CYBR C230	Network Security (Security+)	3
4th Semester		
ASTR C100	Introduction to Astronomy	3
ASTR C100L	Astronomy Laboratory	1
PSCI C180	American Government	3
SOC C233	Racial and Ethnic Relations in America	3
HLTH C100	Personal Health	3
CYBR C255	Cybersecurity Analyst (CySA+)	3

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Also offered in the summer term

Path 2 (Cyber Incident Responder)

Course	Title	Units
1st Semester		
ENGL C100	Freshman Composition	4
MATH C160	Introduction to Statistics	4
CMST C101	Fundamentals of Human Communication *	3
CST C158	Contemporary Operating Systems (Server +) *	3
2nd Semester		
HIST C175	United States History since 1876	3
PSYC C100	Introduction to Psychology	3
ART C101	Survey of Art: Renaissance to Contemporary	3
CIS C157	Introduction to Python Programming *	3
CST C128	Computer Networking Principles (Network +) *	3
3rd Semester		
BIOL C100	Introduction to Biology	3
ENGL C102	Critical Reasoning, Reading, and Writing	3
PHIL C120	Ethics	3
CYBR C230	Network Security (Security+)	3
CYBR C160	Introduction to Incident Response	3
4th Semester		
ASTR C100	Introduction to Astronomy	3
ASTR C100L	Astronomy Laboratory	1
PSCI C180	American Government	3
SOC C233	Racial and Ethnic Relations in America	3
HLTH C100	Personal Health	3
CYBR C260	Intermediate Incident Response	3

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Also offered in the summer term

Path 3 (Cyber Forensic Analyst)

Course	Title	Units
1st Semester		
ENGL C100	Freshman Composition	4
MATH C160	Introduction to Statistics	4
CMST C101	Fundamentals of Human Communication	3
CYBR C101	Introduction to Cybersecurity *	3
CST C158	Contemporary Operating Systems (Server +) *	3
2nd Semester		
HIST C175	United States History since 1876	3
PSYC C100	Introduction to Psychology	3
ART C101	Survey of Art: Renaissance to Contemporary	3
CIS C157	Introduction to Python Programming *	3
CST C128	Computer Networking Principles (Network +) *	3
3rd Semester		
BIOL C100	Introduction to Biology	3
ENGL C102	Critical Reasoning, Reading, and Writing	3
PHIL C120	Ethics	3
CST C191A	Linux Operating System Principles (Linux+)	3
CYBR C150	Introduction to Digital Forensics	3
4th Semester		
ASTR C100	Introduction to Astronomy	3
ASTR C100L	Astronomy Laboratory	1
PSCI C180	American Government	3
SOC C233	Racial and Ethnic Relations in America	3
HLTH C100	Personal Health	3
CYBR C250	Intermediate Digital Forensics	3

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Also offered in the summer term

Path 4 (Penetration Testing)

Course	Title	Units
1st Semester		
ENGL C100	Freshman Composition	4
MATH C160	Introduction to Statistics	4
CMST C101	Fundamentals of Human Communication	3
CYBR C101	Introduction to Cybersecurity *	3
CST C158	Contemporary Operating Systems (Server +) *	3
2nd Semester		
HIST C175	United States History since 1876	3
PSYC C100	Introduction to Psychology	3
ART C101	Survey of Art: Renaissance to Contemporary	3
CIS C157	Introduction to Python Programming *	3
CST C128	Computer Networking Principles (Network +) *	3
3rd Semester		
BIOL C100	Introduction to Biology	3
ENGL C102	Critical Reasoning, Reading, and Writing	3

Course	Title	Units
PHIL C120	Ethics	3
CST C191A	Linux Operating System Principles (Linux+)	3
CYBR C132	Introduction to Ethical Hacking	3
4th Semester		
ASTR C100	Introduction to Astronomy	3
ASTR C100L	Astronomy Laboratory	1
PSCI C180	American Government	3
SOC C233	Racial and Ethnic Relations in America	3
HLTH C100	Personal Health	3
CYBR C242	Vulnerability Assessment (PenTest+)	3

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Also offered in the summer term

Path 5 (Information Security Director)

Course	Title	Units
1st Semester		
ENGL C100	Freshman Composition	4
MATH C160	Introduction to Statistics	4
CMST C101	Fundamentals of Human Communication	3
CYBR C101	Introduction to Cybersecurity [*]	3
CST C158	Contemporary Operating Systems (Server +) [*]	3
2nd Semester		
HIST C175	United States History since 1876	3
PSYC C100	Introduction to Psychology	3
ART C101	Survey of Art: Renaissance to Contemporary	3
CIS C157	Introduction to Python Programming [*]	3
CST C128	Computer Networking Principles (Network +) [*]	3
3rd Semester		
BIOL C100	Introduction to Biology	3
ENGL C102	Critical Reasoning, Reading, and Writing	3
PHIL C120	Ethics	3
CYBR C170	Cybercrime and CSIRT Coordination	3
CYBR C230	Network Security (Security+)	3
4th Semester		
ASTR C100	Introduction to Astronomy	3
ASTR C100L	Astronomy Laboratory	1
PSCI C180	American Government	3
SOC C233	Racial and Ethnic Relations in America	3
HLTH C100	Personal Health	3
CYBR C270	Certified Information Systems Security Professional	3

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Also offered in the summer term