Coastline College

2018-2019 Catalog Addendum

Cybersecurity

Associate of Science Degree (Revised)

3_AS_CYBR2

The Associate in Science in Cybersecurity degree will provide students with a solid foundation in the fields of Computer Networking and Cybersecurity. The focus on Cybersecurity will provide the student with some of the basic skills needed for an entry-level career in Cybersecurity. The program is designed to prepare students for entry-level jobs in computer security or to help them advance in their career. Topics covered will include computer and network security, Windows Operating System security, Linux security, firewalls, intrusion detection systems, security policies and procedures, e-mail and Web security, and designing and building a secure computer network.

PROGRAM LEVEL STUDENT LEARNING OUTCOMES

1. Demonstrate the ability to locate technical resources to solve security-related problems with networking hardware and software.
2. Demonstrate proficiency with various tools to solve common security problems using theories learned in the classroom to design and implement a workable solution.
3. Evaluate, assess vulnerabilities, and maintain secure networks.

Students must complete all core courses plus nine (9) units from the following list of courses in specialized areas.

Required Core	Units
CST C128 Network+	3.0
CST C230 Introduction to Security	3.0
CST C158 Server+	3.0
CIS C157 Introduction to Python Programming	3.0
Subtotal	12.0

Program Electives:

Select 3 courses from the following specialized areas:

CST C191 CompTIA Linux +	3.0
CST C231 CompTIA Advanced Security Practitioner	3.0
CST C232 Ethical Hacking	3.0
CST C242 PenTest+	3.0
CST C245 Exploring Computer Forensics	3.0
CST C245 Exploring Computer Forensics	3.0
CST C253 Cisco ASA, PIX, and Network Security	3.0
CST C255 Cybersecurity Analyst+	3.0
CST C258 Linux Networking and Security	3.0
CST C260 Certified Information Systems Security Professional	3.0
Subtotal	9.0
Subtotal for Major	21.0

Complete one of the three General Education options plus electives to meet the 60-unit requirement.

Total for Degree 60.0

Cybersecurity

Certificate of Achievement (No Change)

3_CL_CYBER

The Computer Networking: Cybersecurity program will give the student a solid background in the field of Computer Security. The focus on Cybersecurity will provide the student with some of the basic skills needed for an entry-level career in Cybersecurity. The courses provide an overview of the entire field. Topics covered will include Cisco Security, Windows Operating System security, Linux security, Firewalls, Intruder Detection systems, Security policies and procedures, e-mail & Web security, and design and designing and building a secure computer network.

PROGRAM LEVEL STUDENT LEARNING OUTCOMES

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

1. Demonstrate the ability to locate technical resources to solve problems with networking hardware and software.
2. Demonstrate proficiency with various software packages to solve common networking problems using theories learned in the classroom to design and implement a workable solution.
3. Build and maintain secure networks.

Required Core		Units
Students will complete all of the following:		
CST C116	A + Essentials Hardware	3.0
CST C128	Network+	3.0
CST C177	Configuring MS Windows 8	3.0
CST C191	CompTIA Linux+	3.0
CST C201C	CCNA 1: Introduction to Networks	3.0
CST C230	Introduction to Security	3.0
Subtotal		18.0
Program Electives:		
Choose three of the following courses:		
CST C231	CompTIA Advanced Security Practitioner	3.0
CST C232	Ethical Hacking	3.0
CST C245	Exploring Computer Forensics	3.0
CST C248	Wireless Networking	3.0
CST C253	Cisco ASA, PIX, and Network Security	3.0
CST C258	Linux Networking and Security	3.0
CST C260	Certified Information Systems Security Professional	3.0
Subtotal Electives		9.0
Total for Certificate		27.0

Cybersecurity Fundamentals

Certificate of Accomplishment (New)

3_CE_CYFUND

This Certificate of Accomplishment will provide students with a preliminary foundation in the fields of Computer Networking and Cybersecurity. The courses include fundamental skills needed in computer networking, server administration, and cybersecurity principles. The emphasis on Computer Networking and Cybersecurity will provide students with the foundational skills needed for an entry-level career in Cybersecurity. Topics covered will include networking fundamentals, computer and network security, programming with Python, Linux and Windows server administration, and security policies and procedures.

PROGRAM LEVEL STUDENT LEARNING OUTCOMES

1. Demonstrate the ability to locate technical resources to solve security-related problems with networking hardware and software.
2. Demonstrate proficiency with various software tools to solve common security problems using theories learned in the classroom to design and implement an appropriate solution that meets industry standards.

Required Core		Units
Students will complete all of the following:		
CST C128	Network+	3.0
CST C230	Introduction to Security	3.0
CST C158	Server+	3.0
CIS C157	Introduction to Python Programming	3.0
Total for Certificate		12.0

IT Foundation

Certificate of Accomplishment (New)

3_CE_ITFOUN

This Certificate of Accomplishment will provide students with a preliminary foundation in the field of Computer Networking. The courses include fundamental skills needed in computer networking, help desk troubleshooting, and security best practices for devices. The emphasis on Computer Networking will provide students with the foundational skills needed for an entry-level career in computer networking. Topics covered will include IT terminology and concepts, infrastructure, managing applications and software, software development concepts, database fundamentals, and device security.

PROGRAM LEVEL STUDENT LEARNING OUTCOMES

1. Demonstrate proficiency using Internet research techniques to solve common troubleshooting problems by designing and implementing an appropriate solution that meets industry standards.
2. Demonstrate the ability to assemble and/or upgrade a personal computer.

Required Core		Units
Students will complete all of the following:		
CST C099	IT Fundamentals	3.0
CST C116	A+ Essentials Hardware	3.0
CST C117	A+ Essentials Software	3.0
CST C128	Network+	3.0
Total for Certificate		12.0

Penetration Testing

Certificate of Accomplishment (New)

3_CE_PENTST

This Certificate of Accomplishment will provide students with a foundation in the field of Penetration Testing. The courses include fundamental skills needed in information security, cybersecurity principles, ethical hacking, and penetration testing. The emphasis on hands-on security practices and vulnerability testing will provide students with the foundational skills needed for an entry-level career in penetration testing. Topics covered will include computer and network security, infrastructure and operational security, risk mitigation, ethics, hardware vulnerabilities, hacker techniques, and security policies and procedures.

PROGRAM LEVEL STUDENT LEARNING OUTCOMES

1. Given a lab scenario, use vulnerability testing tools to find system vulnerabilities.
2. Explain the process of leveraging information to prepare for exploitation.
3. Using report writing and handling best practices, report on findings and remediation.

Required Core		Units
Students will complete all of the following:		
CST C230	Introduction to Security	3.0
CST C191	CompTIA Linux+	3.0
CST C232	Ethical Hacking	3.0
CST C242	PenTest+	3.0
Total for Certificate		12.0

New Courses

BIOLOGY (BIOL)

BIOLOGY C122 3.0 Units

Bioethics

Bioethics looks at the ethical implications of advancements in biology and medicine and at how they affect decisions on life, death, biotechnology, politics, law, and philosophy. This course is identical to PHIL C122 and fulfills the philosophy humanities requirement. Transfer Credit: CSU.

COMPUTER SERVICES TECHNOLOGY (CST)

COMPUTER SERVICES

TECHNOLOGY C096 3.0 Units

CyberPatriot Coaching

ADVISORY: CST C099

This course prepares students for coaching the CyberPatriot cyber defense competition. It covers the introduction to CyberPatriot, recruitment of competitors, competition operating systems, overview of virtual machines, and preparation for competition. The course includes an introduction to security fundamentals. Students will learn about resources available for coaches and competitors, such as scoring engines and competition preparation materials.

COMPUTER SERVICES

TECHNOLOGY C099 3.0 Units

IT Fundamentals

ADVISORY: CIS C113

This course will cover the topics of the IT Fundamentals certification exam, which validates the knowledge and skills required to identify and explain the basics of computing, IT infrastructure, software development, and database use. In addition, candidates will demonstrate their knowledge to install software, establish basic network connectivity, and identify/prevent basic security risks. Technologies and trends of the IT industry will be covered to reinforce current best practices.

COMPUTER SERVICES

TECHNOLOGY C222A 3.0 Units

Installing/Configuring Windows Server 2016

ADVISORY: CST C128, C117

This course focuses on the installation, storage, and compute features and functionality available in Windows Server 2016. It also covers local and server storage solutions, including the configuration of disks and volumes, Data Deduplication, High Availability, Disaster Recovery, Storage Spaces Direct, and Failover Clustering solutions. Topics covered map to Microsoft 70-740 Exam. Transfer Credit: CSU.

COMPUTER SERVICES

TECHNOLOGY C223A 3.0 Units

Networking with Windows Server 2016

ADVISORY: CST C222A

This class focuses on the networking features and functionality available in Windows Server 2016. It covers DNS, DHCP, and IPAM implementations, in addition to remote access solutions, such as VPN and Direct Access. It also covers high-performance network features and functionality, and implementation of software-defined networking (SDN) solutions, such as Hyper-V Network Virtualization (HNV) and Network Controller. Topics covered map to Microsoft 70-741 Exam. Transfer Credit: CSU.

COMPUTER SERVICES

TECHNOLOGY C242 3.0 Units

PenTest+

ADVISORY: CST C232 and C230 and C128

This course will cover the topics of the PenTest+ certification exam, which validates the knowledge and skills required to plan and scope an assessment, understand legal and compliance requirements, perform vulnerability scanning and penetration testing using appropriate tools and techniques, and analyze the results. In addition, candidates will demonstrate their knowledge by producing a written report containing proposed remediation techniques and provide practical recommendations that can be effectively communicated to management. Technologies and trends of the IT industry will be covered to reinforce current best practices. Transfer Credit: CSU.

DIGITAL GRAPHICS APPLICATIONS (DGA)

DIGITAL GRAPHICS

APPLICATIONS C135 3.0 Units

Digital Media Design Principles

This introductory course in digital media design principles will focus on concepts, theories, and practices required in a media design career path for the workplace. The course includes aspects of the design process selection, problem-solving, client relations, production techniques, and varied media solutions. Topics range from proximity and alignment to contrast, visual hierarchy, value, and balance. Projects are aligned with authentic industry outcomes, resulting in entry-level readiness for professional work or employment. Current industry software will be utilized to produce the required projects. Transfer Credit: CSU.

ENGLISH (ENGL)

ENGLISH C090 1.0 Unit

English Basic Skills Co-requisite

COREQUISITE: ENGL C100

Students will review the basics of grammar and academic reading and writing through activities, reading assignments, and short writing assignments. Concurrent enrollment in specified sections of English C100 is required. (NOT DEGREE APPLICABLE.)

HUMAN SERVICES (HSVC)

HUMAN SERVICES C105 3.0 Units

Introduction to Case Management

This course introduces students to case management and documentation in a variety of settings. Students will study the purpose, function, and rationale for case management. In addition, the documentation of client clinical records will be covered, emphasizing the taking of social histories and writing of treatment plans. The professional guidelines necessary for working with clients in a social services setting will also be covered, providing the student with an understanding of issues related to ethics, client rights, and confidentiality. This class is designed for students interested in working in a social services setting. Transfer Credit: CSU.

PHILOSOPHY (PHIL)

PHILOSOPHY C122 3.0 Units

Bioethics

Bioethics looks at the ethical implications of advancements in biology and medicine and at how they affect decisions on life, death, biotechnology, politics, law, and philosophy. This course is identical to BIOL C122 and fulfills the philosophy humanities requirement. Transfer Credit: CSU.