Cybersecurity
Associate in Science

DIVISION OF SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

The Cybersecurity Associate in Science degree provides courses and content that are aligned with two major sources of proven requirements for cybersecurity education in 2-year colleges: NICE Framework from National Institute of Standards and Technology (NIST) and Knowledge Unit required for National Centers of Academic Excellence (CAE) in Information Assurance/Cyber Defense (IA/CD) designation, a program jointly sponsored by the National Security Agency (NSA) and the Department of Homeland Security (DHS).

The goal of this program is to offer a balanced and comprehensive security program that could lead to the CAE-2Y designation for MassBay. The objective of this program is to provide students with such knowledge, skills, and abilities that are expected from a student who has earned an associate degree in cybersecurity from a CAE-2Y designated program. Students completing this program will be able to successfully pass a number of CompTIA and Cisco's certifications.

Career Outlook:
This degree program prepares students with appropriate security knowledge to enable their employment as a network and security technician and/or specialist. Students completing this certificate are trained with the latest technology and learning environment acquiring knowledge in networking and security that will help them secure a position in security field that offers great job opportunities.

Upon successful completion, the Associate in Science Degree in Cybersecurity is awarded.

PROGRAM FOOTNOTES

Program Electives: CS 113 Fundamentals of Information Technology (IT), CS 212 Systems Programming with C, CS213 Database Management, CS214 Computer Architecture and Assembly Language

Humanities Electives:
Art, Communication, English (EN 103 or higher), Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives: Anthropology, Economics, Geography, Government, History, Law, Psychology, Sociology

COURSE	COURSE TITLE	CREDITS
First Year	*Semester 1*	
CT 100	Critical Thinking	3
CS 110	Introduction to Computer Science	4
EN 101	Freshman English I	3
CS 118	Scripting	3
MA 105	Introduction to Statistics	3
	or	
MA 106	Quantitative Reasoning	3
	credits:	16
First Year	*Semester 2*	
CS 180	Intro to Operating Systems	3
CS 116	Fundamentals of Cybersecurity	3
EN 102	Freshman English II	3
CS 242	Computer Networks	4
	Humanities/Social Science Elective	3
	credits:	16
Second Year	*Semester 1*	
CS 141	Linux System Management	3
	Humanities/Social Science Elective	3
CS 243	Computer Networks II	4
	Program Elective	3/4
CS 117	Cyber Ethics	3
	credits:	16/17
Second Year	*Semester 2*	
CS 247	Perimeter Defense	3
CS248	Securing Access	3
	Humanities/Social Science Elective	3
	Program Elective	3/4
CS 281	Capstone Experience	3
	credits:	15/16
	Total Credits:	**63/65**

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of any 100-level mathematics course or higher, except mathematics courses with a MAC prefix.