



## **Division of Science, Technology, Engineering and Mathematics**

### **Advanced Cyber Security Certificate**

The Advanced Cyber Security Certificate prepares students with in-depth knowledge and skills in networking and cyber security. Most of the certificate courses are aligned with the National Initiative for Cybersecurity Education (NICE) framework and Cisco Academy certification guidelines, transferrable to a four-year institution, and prepare students for industry standard certifications. The courses are also required courses for MassBay's Cyber Security A.S. degree program. Students are trained with current technology and tools that they need to find a network and security technician or specialist position.

Successful graduate of this Associate in Science degree will be able to:

1. Identify security threats and vulnerabilities and mitigate the risks by choosing the best protection (Access Control) and prevention (perimeter defense) methods;
2. Understand the cryptographic systems and can select a cryptographic system based on a specific system's requirements;
3. Use scripting language to implement solutions for network and system administration problems;
4. Design, maintain, and manage a small network of computers;
5. Use network diagnostics tools effectively to evaluate and analyze network issues;
6. Setup, configure, test, maintain networking devices with effective and up-to-date techniques as well as monitoring;
7. Describe different components of modern Operating Systems and perform general operations (installation, setup, and configuration as well as accounts and application management).