Explore the world of cybersecurity and computer programming!



Use your logic and coding skills to improve user experience, create apps, develop games, expose website vulnerabilities, and create security barriers.

In-Demand Information Technology Occupations

Minnesota Salary Range: $59,611 - 156,396

Certification
Cybersecurity Network Technician

Associate Degree
Computer Network Support Specialist

Bachelor's Degree
Software Developer
Information Systems Manager

Course Numbers	Course Name	Credits	Graduation Requirement	Articulated College Credit
91009AO	IT Exploration	.5	Elective	Yes

Explore careers in computer science and information technology through simulations and independent projects. In this course you will develop skills related to digital media, computer hardware, operating systems, communication networks, software development, databases, and emerging technologies. (Online Only, except at EHS)

95607AO	Computer Programming & App Design	1.0 year long	Elective	Yes

Explore how innovations in computing impact and connect our world. In this introductory programming course you will create apps and learn essential concepts and data structures that form the foundation of our digital world. This course is appropriate for any student proficient with algebra. (Online Only)

95616	Computer Programming & Game Design 1	1.0	Elective	Yes

Expand your computer programming skills through the creation of games and applications! Develop strong foundational skills used in game and app design through the creation of multiple game projects culminating in a personal game or application using real-world tools and skills. Interested students having completed the course will be prepared for the College Board Computer Science Principles AP exam.

95626	Computer Programming & Game Design 2	1.0	Elective	Yes

Become an expert in Object-Oriented Programming (OOP) through advanced game and app development! Through small group and individual projects you will design, write, and test computer games and applications that solve problems, educate, entertain, or accomplish tasks. Upon completion, interested students will be prepared for the College Board Computer Science A AP exam.

95637 95638	Cybersecurity 1 Cybersecurity 2	1.0	Elective	Yes

Cybersecurity 1 - 95637 (Also available online)
Learn about the world of cybersecurity! Investigate strategies to identify and protect against security threats such as hackers, eavesdropping and network attacks. Explore the basics of cryptography and logic reasoning. Experiential labs in a virtualized, safe environment provide practice in the configuration and mitigation of system vulnerabilities. Each unit integrates current events and related cyber ethics and law. *This course is a prerequisite for course 95638.*

Cybersecurity 2 - 95638 (Also available online)
This course extends that foundation started in Cybersecurity 1 with new topics in reconnaissance, network & system threats, web applications, databases, and encryption, while emphasizing defense strategies such as preventive controls, security tools, and incident response. Students will be introduced to cyber competitions including the National Cyber Cup, PicoCTF, CyberStart America, and CyberPatriot. These events provide students with opportunities to independently expand their cybersecurity learning, to win scholarships, and to access career pathways.