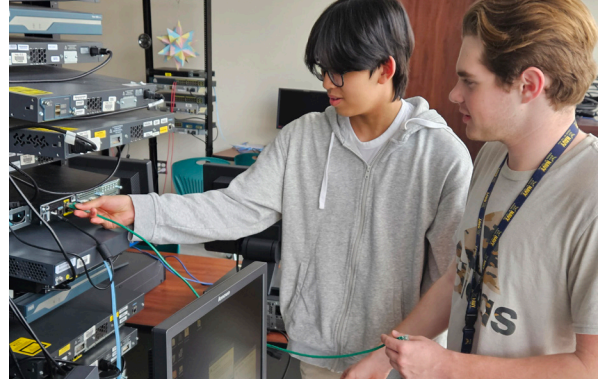


INFORMATION TECHNOLOGY

CAREER CLUSTER



PROGRAM OF STUDY:

CISCO NETWORK ENGINEERING

Course	Credits	Class Periods	Grade	Location
Principles of Information Technology* <u>OR</u>	1.0	1	8	Junior High
Introduction to Computer Science* <u>OR</u>	1.0	1	9-12	Home Campus
Computer Science I* <u>OR</u>	1.0	1	9-12	Home Campus
AP Computer Science Principles* <i>Prerequisite: Algebra I</i> <u>OR</u>	1.0	1	9-12	Home Campus
AP Computer Science A* <i>Prerequisite: Algebra I</i> <i>Successful completion of this course awards one advanced math credit and one language other than English credit</i> <u>OR</u>	1.0	1	9-12	Home Campus
Computer Technician*	2.0	2	11-12	MCTC
Network Engineering I & Lab <i>Prerequisite: Principles of Information Technology* or Intro to Computer Science* or Computer Science I* or AP Computer Science Principles* or AP Computer Science A* or Computer Technician*</i> <i>*The Classes of 2025 and 2026 are waived from the prerequisite requirement for Network Engineering. Note: Students must have completed Algebra II or be concurrently enrolled in Algebra II</i>	2.0	2	11-12	MCTC
Network Engineering II & Lab <i>Prerequisite: Network Engineering I & Lab</i>	2.0	2	12	MCTC

CERTIFICATION OPPORTUNITIES

After successfully completing our two year Network Engineering program, students will be prepared to sit for the Cisco Certified Network Associate (CCNA) certification. This industry-level certification is one of the most sought-after in the IT field.

8685V CISCO NETWORK ENGINEERING I AND LAB

Grades: 11-12 2 Credits

Prerequisites: Algebra II or concurrent enrollment in Algebra II AND Principles of Information Technology or Introduction to Computer Science or Computer Science I or AP Computer Science Principles or AP Computer Science A or Computer Technician

**The Classes of 2025 and 2026 are waived from the prerequisite requirement for Cisco Network Engineering I, with the exception of Algebra II.*

This course provides an introduction to the basics of computer networking. Students focus on network architecture, function, theory, and design. Students build networks using enterprise-level Cisco equipment and learn hands-on job skills, including network configuration and troubleshooting. By the end of the course, students will be able to design and build LANs, configure enterprise routers and switches, and implement IP addressing schemes.

8686V CISCO NETWORK ENGINEERING II AND LAB

Grade: 12 2 Credits

Prerequisite: Network Engineering I and Lab

This course focuses on advanced network engineering concepts used to support large-scale enterprise networks that are commonly found in the industry today. It is designed to prepare students to sit for Cisco's CCNA certification exam. Students learn advanced routing and switching concepts, wireless essentials, and network security automation. They troubleshoot routers and switches and learn to resolve common issues.

PROGRAM EXPERIENCES

This class is designed to prepare students for entry-level work in network engineering. It lays the foundation for not only networking, but also IT specialties such as Cyber Security. Students learn how to build and maintain the enterprise level networks that companies large and small rely on. The knowledge and experience gained in this class can lead to an early start to a career in IT.

EXPECTATIONS OF STUDENTS

- Willingness to engage in lectures and labs to practice knowledge gained.
- Ability to acquire basic understanding of how networks function.
- Ability to work independently on the computer.

CAREER POSSIBILITIES

- Chief Information Officer
- IT Manager
- Network Engineer
- Specialties including Cloud Computing & Security
- Systems Administrator

