

**Computer Systems Networking (4) Year Program – 24 Credits for Graduation
CIP #-11.0901-Program of Study**

Period	9	10	11	12
1	English I	English II	English III	English IV
2	Algebra I	Geometry	Algebra II	*Math-Any advanced math course
3	Geo-Environmental	Biology I	Chemistry or Physics	*Science-Any advance science course
4	PE/Health I	PE/Safety Education	PE Health II (11 th or 12 th)	PE Health II (11 th or 12 th)
5	US History I	World History I	Civics	
6	Foundations of Technology or Honors Intro to Engineering or AP Computer Science Principles	Honors Intro to Engineering or AP Computer Science Principles	AP Computer Science or Honors Intro to Engineering Or Computer Integrated Manufacturing	AP Computer Science or HU Raspberry Pi Capstone Cooperative Education or Capstone IT Intern: 2 credits
7	IT 1 = IT Essentials	IT 2 = Cisco Networking Part I	IT 3 = Cisco Networking Part II	IT 4-Workstation/ Server Operating Systems
CTE Total Hours: 1,320	305 hours 55 Skills hours	317.2 class hours 55 Skills hours 372.2 total hours	317.2 class hours 55 Skills hours 372.2 total hours	469.5 hours

- Students need a minimum of ten credits in the combined social studies, science and mathematics areas.
- Students must make-up all failed classes in summer school to complete this program of study.
- Students must pass all required Keystone Exams and/or complete remediation courses.

AP Computer Science Principles and AP Computer Science A

See the Math Department section for course descriptions (page 65)

Satisfies Computer System Network Hours and qualifies as a Math Credit

Raspberry Pi

See the Math Department section for course description (page 66)

Satisfies Computer System Network Hours and qualifies as a Math Credit

IT I - Essentials - Course #7025

No prerequisite

Grades 9-12

Grade 9 enrollment is subject to seat availability

Certification Goal: A+ Computer Technician

1 credit

5 pds/wk

The IT Essentials course focuses on the content and skills needed for the A+ computer hardware and software certification. Students learn information technology and data communications in an

exploratory format. Students will develop the necessary skills to enter the IT field by building a computer, installing the operating system, adding peripherals, and receiving an overview of networking. The course is both a content and lab-oriented course that stresses laboratory safety, working in a team environment, and strategies to provide effective technical training and support.

Note:

The following Cisco Networking Academy Program courses are one-year options; yet provide the ability for a student to earn their CCNA. After the completion of the Cisco Networking Part I course, students can sit for their INTRO exam and upon successful completion of the Cisco Networking Part II course can sit for their ICND exam. Achieving successful scores on both the INTRO and ICND exams, students will earn their CCNA certification.

IT II - Cisco Networking Part 1 - Course #7000

Recommended prerequisite: IT Essentials, algebra skills 1 credit
Grades 10-12 5 pds/wk
Certification goal: INTRO exams towards CCNA (Cisco Certified Networking Associate)

This course provides students with classroom and lab experience in current and emerging networking technology. Students will configure computers for networking, build small home based networks, and install wireless networks. Instruction includes safety, network terminology and protocols, standards, Open Systems Interconnect (OSI), cabling, Transmission Control Protocol/Internet Protocol (TCP/IP) addressing, dynamic routing, router configuration, network design, and the functions of a network administrator. This course is a prerequisite to Cisco Networking Part II.

IT III - Cisco Networking Part 2 - Course #7020

Prerequisite: Cisco Networking Part I 1 credit
Grades 11-12 5 pds/wk
Certification goal: ICND Exam towards CCNA (Cisco Certified Networking Associate)

This course provides students with additional classroom and lab experience in current and emerging networking technology. Students will focus on preparing for their CCNA certificate and in preparing them to acquire a position in the networking field and/or to continue with post-secondary educational goals in the field. The course covers advanced topics related to the previous Cisco Networking Part I course with an emphasis on troubleshooting. The course includes advanced network design, configuration, and installation.

Note: To obtain CCNA Certification, a student must successfully complete both Cisco Networking Part I and Part II over a two-year period.

IT IV – Workstation/Server Operating Systems - Course #7029

Prerequisite: Current IT students will be given priority. 1 credit
Grades 10-12 5 pds/wk
Certification goal: Microsoft Certified Professional

This course prepares students for certifications as Microsoft Certified Professionals (MCP's) in both desktop PC's and Server operating systems. This operating system is for computer networking. Professionals with these certificates are in high demand.

IT Internship Program – Course codes vary by program and number of class periods. Please see your counselor for information.

Prerequisite: IT I, II, & III complete. IT IV completed or enrolled. 1-3 credits
Grade 12 5-15 pds/wk

The in-house IT intern position is available to a limited number of IT students who have completed or are in their final year of the IT program. The intern will be responsible for assisting the IT students as they proceed through the program. This will include...

- a. PC assembly and repair, configuration, maintenance, and troubleshooting.
- b. Cisco router and switch configuration and trouble shooting.
- c. network design, construction, troubleshooting, and repair.

The successful candidate will be required to have knowledge of all of the above topics and needs pre-approved by the instructor.

** Some interns may be required to take part in the student run helpdesk for the student population**

Capstone Internship with Information Technology Program - Course codes vary by program and number of class periods. Please see your counselor for information.

Prerequisite: Instructor Permission

2 credits

Grades 11-12

10 pds/wk

This internship experience is available to students to intern with the information technology program providing technical and training assistance. A meeting with both the IT program instructor and the Cooperative Education Coordinator is required prior to enrollment.