



INFORMATION COMMUNICATION TECHNOLOGY SECTOR

Networking Pathway (172)

Offered at Canyon, El Modena, Orange, Richland, & Villa Park High School

Vocational Education Level	Course Name	Course Number	Articulations	Voc. Ed Level Label
01	Exploring Computer Science (UC-G)	O651*		Introductory
02	ICT Essential I	O608	CCC	Concentrator
03	ICT Essentials II	O609	CCC	Concentrator
03	Networking Technology	O629	CCC	Capstone
03	Professional Internship	O745		Capstone

EXPLORING COMPUTER SCIENCE

O651*

This is the first course in the Information and Computer Technology (ICT) Sector Pathway. Students are introduced to the foundations of Computer Science using an inquiry-based, hands-on approach to understand and solving real world computing problems. Instruction includes the areas of Human Computer Interaction, Problem Solving, Web Design, Programming, Data Analysis and Robotics. Emphasis is placed on the creative, collaborative, interdisciplinary and problem-solving nature of computing. Upon completing the course, students will be prepared to pursue more advanced courses in the pathway, and to further their exploration of college and careers in the ICT Industry. **Exploring Computer Science is UC approved as a "G" Elective.** NOTE: This course follows the National Course outline developed by UCLA and LAUSD.

ICT ESSENTIALS I

O608

This course focuses on the implementation and support of computer services and software. Instruction prepares students for careers and industry certification in the Information and Communication Technologies area, as well as equips them to pursue post-secondary education and advancement in the field. ICT Essentials I concentrates on computer hardware, with a focus on architecture, central processing units, memory systems, operating system basics, hardware and an introduction to network cards. Instruction includes those areas and skills included on the Fundamentals portion of the A+ Certification I exam and components of the A+ Certification II exam.

ICT ESSENTIALS II

O609

ICT Essentials II is the second part of the ICT Essentials/Certification sequence. This course completes student preparation for the second A+ Certification Exam and extends their instruction to include those skills needed for Network + Certification. Instruction concentrates on the installation and configuration of computer operating systems with associated hardware, system optimization, connectivity, networking, and security. Students will obtain the skills and knowledge needed to maintain, troubleshoot, install, operate and configure basic network infrastructure, networking technologies, and design principles. Students will install, configure and troubleshoot basic networking hardware, protocols and services.

NETWORKING TECHNOLOGY

O629

This course prepares the student to pass the industry association Network+ exam that certifies them as foundation-level IT practitioners. Students will obtain the skills and knowledge needed to maintain, troubleshoot, install, operate and configure basic network infrastructure, networking technologies, and design principles. Students will install, configure and troubleshoot basic networking hardware, protocols and services.

PROFESSIONAL INTERNSHIP

O745

This practicum and internship course allows the students to apply academic and career readiness skills in a workplace environment. Instruction will combine standards-based classroom instruction with extended on-site industry experience. Students will learn all aspects of Professionalism, and apply 21st Century Skills of Communication, Collaboration, Critical Thinking, Creativity and Problem Solving in a real world setting. Interested students can prepare to take the WorkKeys National Career Readiness Certificate.

**Canyon High School Pathways**

<http://www.canyonhighschool.org/academics/CTE>

El Modena High School Pathways

http://www.elmodenahs.org/apps/pages/index.jsp?uREC_ID=382265&type=d&pREC_ID=879439

Orange High School Pathways

<http://www.orangeusd.org/ohs/docs/pathwaysflyer.pdf>

Villa Park High School Pathways

http://www.villaparkhigh.org/apps/pages/index.jsp?uREC_ID=419726&type=d&pREC_ID=917448

