



Cisco Networking Academy

San Joaquin Delta College, in partnership with industry leader Cisco Systems, is proud to offer the Cisco Networking Academy. The program includes training in computer network design, implementation, and administration. It also provides course work for a complete range of basic through advanced networking concepts - from pulling cable through such complex concepts as subnet masking, routing, and access lists. The Cisco Networking Academy is a comprehensive 4-course program (Electronics 30A through 30D) which teaches students to design, build, and maintain computer networks, and at the same time, prepares them to take the Cisco Certified Networking Associate (CCNA) exam. CCNA certification includes the ability to install, configure, and operate routed LAN, routed WAN, and switched LAN networks. The program combines lectures, online learning, and hands-on laboratory exercises. The CCNA program is divided into the following 4 courses, and each class must be taken in sequence:

CCNA 1 Curriculum: Networking Basics (ELECT 30A)

- Networking Fundamentals
- Networking Media
- Ethernet Fundamentals
- Internet Protocol (IP) addressing, including subnet masks
- Routing Fundamentals and Subnets

CCNA 2 Curriculum: Router and Routing Basics (ELECT 30B)

- WANs and Routers
- Configuring a Router
- Routing and Routing Protocols
- Intermediate TCP/IP
- Access Control Lists

CCNA 3 Curriculum: Switching Basics and Intermediate Routing (ELECT 30C)

- Introduction to Classless Routing
- Single-Area OSPF
- EIGRP
- Switching Concepts
- Spanning Tree Protocol
- Virtual Local Area Networks (VLANs)
- Virtual Trunking Protocol

CCNA 4 Curriculum: WAN Technologies (ELECT 30D)

- Scaling IP addresses
- WAN Technologies
- PPP
- ISDN and DDR
- Frame Relay
- Introduction to Network Administration

The Tracy Center now offers classes for second level certification. The first of 4 classes, Electronics 32A, prepares the student for industry professional level certification such as the Cisco Certified Network Professional (CCNP).

CCNP 1 Curriculum: Advanced Routing (ELECT 32A)

- Advanced IP Addressing Management
- Routing Overview
- Routing Information Protocol
- EIGRP
- OSPF
- IS-IS
- Route Optimization
- Cisco Networking Academy



ELECT 30A – This course is an introduction to the basic concepts of computer and communication networks. The course focuses on network terminology, protocols, cabling, and cabling tools. Ethernet and IP addressing. The course includes the Open Systems Interconnection (OSI) reference model, network design issues, and network architectures and standards.

ELECT 30B – Prerequisites: None. Advisories: Have completed ELECT 30 or ELECT 77A and ELECT 77B or ELECT 30A. This course focuses on initial router and switch configurations. Wide Area Network connectivity, routing protocol management, and router security using access control lists.

ELECT 30C –Prerequisites: None. Advisories: Have completed ELECT 30B or ELECT 77C and ELECT 77D. This course will cover basic concepts of switching and intermediate concepts of routing. The course focuses on command line interface configuration of switches. VLANs (Virtual Local Area Networks), STP (Spanning-Tree Protocol), and VTP (Virtual Trunking Protocol). The course also covers VLSM (Variable Length Subnet Masks) and intermediate routing protocols such as EIGRP and OSPF.

ELECT 30D –Prerequisites: None. Advisories: Have completed ELECT 30C or ELECT 77E and ELECT 77F. This course focuses in advanced IPv4 (Internet Protocol Version 4) addressing techniques and Wide Area Network technologies and terminology. The course will cover NAT (Network Address Translation) and the use of private addresses to configure and secure a greater number of users within a network. The course will define the concepts and configuration of PAT (Port Address Translation) and DHCP (Dynamic Host Configuration Protocol) for scalability of IPv4 addresses. This course will cover PPP (Point-to-Point Protocol), ISDN (Integrated Services Digital Network), Frame Relay concepts and router configuration.

ELECT 32A – Prerequisites: ELECT 30D with a grade of “C” or better. This course presents an advanced level of administering and supporting scalable network systems using Internet Protocol (IP) technologies. The students learn advanced methods on how to implement several routing protocols including Routing Information Protocol (RIP), Enhanced Interior Gateway Routing Protocol (EIGRP), Open Shortest Path First (OSPF) and other industry standard protocols. Instruction includes IP address management, Network Area Translation (NAT), Variable Length Subnet Mark (VLSM), and advance Access Lists. This course

prepares the students for industry professional level certification such as the Cisco Certified Network Professional (CCNP).

***ELECT 30A-30D** is a 2-semester program. Students will take ELECT 30A and 30B the first semester and ELECT 30C and 30D the second semester. Cost: Tuition is \$26 per unit for California residents. Each class is 4 units. The program is composed of 4 classes. Lab manuals are required, and textbooks are recommended but not required: One (1) for ELECT 30A and 30B and another for ELECT 30C and 30D (\$29.95 and \$66.65 each, respectively).

Apply now...space is limited!

For admission information please call or visit the Tracy Center at 1895 West Lowell Avenue, (209) 833-7900 or the college’s Web site at www.deltacollege.edu.

If you have additional questions about the Cisco Networking Academy, please contact:

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