

The Cisco Networking Academy Program logo, featuring a thick orange cable arching over the text "CISCO NETWORKING ACADEMY PROGRAM" in a serif font on a dark background.

CISCO NETWORKING
ACADEMY PROGRAM

TEJ4M1 – Computer Engineering Technology

Cisco Networking Academy – CCNA2

CCNA - Routing and Switching Essentials

Prerequisites: TEJ3M1 (CCNA1 Certificate – Introduction to Networks)

Teacher: Mr. T. Nguyen

Textbooks: Online curriculum – <https://www.netacad.com> or <http://ciscoacademy/ccna2/>

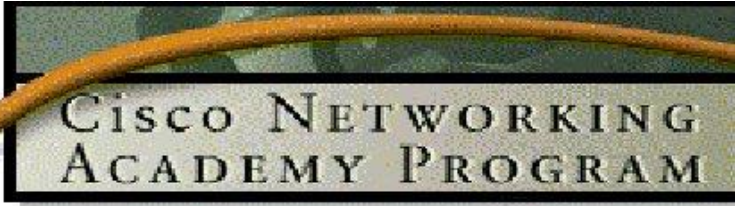
Materials: pens, pencils, paper, binder, supplies as indicated

Course Description and Expectations

This course describes the architecture, components, and operations of routers and switches in a small network. Students learn how to configure a router and a switch for basic functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with RIP, single area and multi-area OSPF, virtual LANs, and inter-VLAN routing in both IPv4 and IPv6 networks.

Students who complete the Routing and Switching Essentials course will be able to perform the following functions:

- Understand and describe basic switching concepts and the operation of Cisco switches
- Understand and describe the purpose, nature, and operations of a router, routing tables, and the route lookup process
- Understand and describe how VLANs create logically separate networks and how routing occurs between them
- Understand and describe dynamic routing protocols, distance vector routing protocols, and link-state routing protocols
- Configure and troubleshoot static routing and default routing
- Configure and troubleshoot an Open Shortest Path First (OSPF) network
- Understand, configure, and troubleshoot access control lists (ACLs) for IPv4 and IPv6 networks
- Understand, configure, and troubleshoot Dynamic Host Configuration Protocol (DHCP) for IPv4 and IPv6 networks
- Understand, configure, and troubleshoot Network Address Translation (NAT) operations

A banner for the Cisco Networking Academy Program, featuring a thick orange cable curving across the top. Below the cable, the text "CISCO NETWORKING ACADEMY PROGRAM" is written in a serif font on a light background.

CISCO NETWORKING ACADEMY PROGRAM

Evaluation:

Weighting: Term 70%

Knowledge - 25%
Thinking - 25 %
Communication - 25%
Application - 25%

Final 30%

Final Exam - 20%
Culminating Activity - 10%

IMPORTANT: To be eligible for Certificate of Completion from Cisco Systems, a course average of at least 50% and a Final Exam mark of 65% or more are needed.

Class Expectations

1. Class lessons, labs and or activities will commence immediately after the start of class. Students are expected to be in class, in full uniform, with all required materials / supplies prior to the starting bell.
2. Students are expected to be on target with class lessons and labs. Students who are absent are responsible for making up missed work. The course curriculum can be reviewed on the Cisco Networking Academy web site at: <https://www.netacad.com>. Students also can access the course curriculum through school computers at <http://ciscoacademy/ccna2/>. Missed labs cannot be completed at a later date. A mark of zero will be assigned for missed in-class work.
3. The Cisco Academy program will present a **Certificate of Completion** from Cisco Systems to all students who successful pass the final exam with a mark of 65% or more (75% for the **Cisco Letter**) and who have been absent less than ten days due to non-school related absences.
4. Students will be provided with on-line IDs and passwords to access the Cisco Networking site. <https://www.netacad.com>. Students will be provided access to the computer network in Rm 108. The 'Computer Access / Networking Agreement' signed by parents and students is in effect. Any student breaking the agreement by damaging class equipment or hacking will lose access to the network.
5. Students must confirm to all of the policies of the 'Student Network Agreement'. Failure to follow these policies may result in the permanent removal from the Cisco Networking Academy program.
6. All assignments and activities must be completed by the due date. Late assignments will result in a reduced grade. After closure date, a mark of zero will be assigned.