Valencia Community College
Computer Engineering Technology (Networking)
Cisco Networking Academy, fall 2003
Class: CET 2625C
Room: 9-210
Certification Track: CCNP
Lecturer: Prof. Yousif, Net+, CCNA, CCDA, CCAI, CCNP-Routing

Section: W01 12:00 PM – 4:30 PM F

Office: West Campus, 9-117
Office Hours:
M 9:00 AM 11:00 AM
T 9:00 AM 11:00 AM
W 9:00 AM 11:00 AM
R 10:00 AM 12:00 PM
F 9:00 AM 11:00 AM
Or by appointment

Phone: 582-1064; (Secretary) (407) 582-1904
E-mail: wyousif@valenciacc.edu
Web Address: http://faculty.valencia.cc.fl.us/wyousif

Course Description:
Building Scalable Cisco Internetworks (BSCI) focuses on Cisco routers that are connected in LANs and WANs, and typically found at a medium to large network sites. When the course is completed, students will be able to select and implement the appropriate Cisco IOS™ services to build a scalable, routed network. BSCN is part of the recommended training path for students seeking the CCNP (Cisco Certified Network Professional) certification.
Prerequisite: CET 2620C - Cisco Projects in Routing Design and Administration course or Proof of CCNA (Cisco Certified Network Associate) certification.

Expected Student Conduct
Valencia Community College is dedicated not only to the advancement of knowledge and learning but is concerned with the development of responsible personal and social conduct. By enrolling at Valencia Community College, a student assumes the responsibility for becoming familiar with and abiding by the general rules of conduct. The primary responsibility for managing the classroom environment rests with the faculty. Students who engage in any prohibited or unlawful acts that result in the disruption of a class may be directed by the faculty member to leave the class. Violation of any classroom or Valencia’s rules may lead to disciplinary action up to and including expulsion from Valencia. Disciplinary action could include being withdrawn from class, disciplinary warning, probation, suspension, expulsion, or other appropriate and
authorized actions. You will find the Student Code of Conduct in the current Valencia Student Handbook.

**Students with disabilities** who qualify for academic accommodations must provide a letter from the Office for Students with Disabilities (OSD) and discuss specific needs with the professor, preferably during the first two weeks of class. The Office for Students with Disabilities determines accommodations based on appropriate documentation of disabilities (West Campus SSB 102, ext. 1523).

**Text Material**
- To Be Announced (On Line Curriculum will be used until the new book that maps to the new exam’s objectives is out)

**Lab Material**
- Three-Ring Binder
- On Line Labs will be used until the new lab manual that maps to the new exam’s objectives is out

**CCNP-Routing (642-801 BSCI) Exam Preparation Kit**
- To Be Announced

**Cisco Academy Web Site**
www.cisco.netacad.net
 ✓ Student Name: first three letters of your last name + first Initial + _ + VCC
  **Example:** a student with the name of Wael Yousif would use: **youw_vcc**
 ✓ Student Password: First 3 letters of your last name + last 4 digits of your SS#
  **Example:** a student with the last name of Yousif and SS# 123456789 would use you6789

**Lab Procedures**
Will be done in lab 9-208 during class time, **and cannot be made-up**. If the student is absent on the day of the lab assignment he/she will not receive credit for that lab.

**Chapter Tests**
Will be given at the beginning of the class **and cannot be made up**, so if the student is late or absent, he/she will not receive credit for that test.

**Grading System**

<table>
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<tr>
<th>End of Chapter Tests</th>
<th>LABS</th>
<th>Attendance and Participation</th>
<th>Final Written (Must Pass to Pass the Class)</th>
<th>Final Hands-On (Must Pass to Pass the Class)</th>
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<td>70-79</td>
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### Week by Week Agenda

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<th>Chapter</th>
<th>DESCRIPTIONS</th>
<th>labs</th>
<th>Tests</th>
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| 8-29 | 1       | Overview of Scalable Internetworks | - **1.4.1** Introductory Lab 1 - Getting Started and Building Start.txt  
- **1.4.2** Introductory Lab 2 - Capturing HyperTerminal and Telnet Sessions  
- **1.4.3** Introductory Lab 3 - Access Control List Basics and Extended Ping  
- **1.4.4** Implementing Quality of Service with Priority Queuing  
- **1.5.1** Equal-Cost Load Balancing with RIP  
- **1.5.2** Unequal-Cost Load Balancing with IGRP | Semester 5 Pretest |
| 9-5  | 2       | Advanced IP Addressing Management | - **2.10.1** Configuring VLSM and IP Unnumbered  
- **2.10.2a** VLSM 1  
- **2.10.2b** VLSM 2  
- **2.10.2c** VLSM 3  
- **2.10.2d** VLSM 4  
- **2.10.3** Using DHCP and IP Helper Addresses  
- **2.10.4a** Network Address Translation – Static NAT and Dynamic NAT  
- **2.10.4b** Network Address Translation – Port Address Translation and Port Forwarding | Chapter 1 Test |
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<th>WEEK</th>
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<td>Routing Overview</td>
<td>[3.6.1] Migrating from RIP to IGRP</td>
<td>Chapter 2 Test</td>
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<td>[3.6.2] Configuring IGRP</td>
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<td>[3.6.3] Configuring Default Routing with RIP and IGRP</td>
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<td>[3.6.4] Configuring Floating Static Routes</td>
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<td>9-19</td>
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<td>Routing Information Protocol V. 2</td>
<td>[4.4.1] Routing between RIPv1 and RIPv2</td>
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<td>[4.4.2] RIPv2 MD5 Authentication</td>
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<td>Labs Catch-up Day</td>
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<td>EIGRP</td>
<td>[5.7.1] Configuring EIGRP</td>
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<td>[5.7.2] Configuring EIGRP Fault Tolerance</td>
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<td>[5.7.3] Configuring EIGRP Summarization</td>
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<td>[5.8.1] EIGRP Challenge Lab</td>
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<td>OSPF</td>
<td>[6.9.1] Configuring OSPF</td>
<td>Chapter 5 Test</td>
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<td>[6.9.2a] Examining the DR/BDR Election Process</td>
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<td>[6.9.3] Configuring Multiarea OSPF</td>
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<td>10-10</td>
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<td>[6.9.5] Configuring an NSSA</td>
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<td>[6.10.1] OSPF Challenge Lab</td>
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<td>10-17</td>
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<td>[7.7.2] Configuring Multiarea Integrated IS-IS</td>
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<td>WEEK</td>
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<td>➢ 7.7.2 Configuring Multiarea Integrated IS-IS (Continued)</td>
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<td>➢ 7.7.3 Configuring IS-IS Over Frame Relay (Bending)</td>
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<td>10-31</td>
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<td>➢ 8.5.1 Configuring Distribute Lists and Passive Interfaces</td>
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<td>Optimization</td>
<td>➢ 8.5.2a Configuring Route Maps</td>
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<td>➢ 8.5.2b NAT: Dynamic Translation with Multiple Pools Using Route Maps</td>
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<td>11-7</td>
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<td>Route</td>
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<td>Optimization</td>
<td>➢ 8.6.1 Route Optimization Challenge Lab</td>
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<td>➢ 9.11.2 Configuring BGP with NAT</td>
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<td>➢ 9.11.4a Configuring BGP and EBGP Sessions, Local Preference and MED 1</td>
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<td>11-21</td>
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<td>BGP</td>
<td>➢ 9.11.4b Configuring a Route Reflector and a Simple Route Filter</td>
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<td>➢ 9.11.4c The BGP COMMUNITIES Attribute</td>
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<td>➢ 9.11.4d BGP Route Reflectors and Route Filters</td>
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<td>➢ 9.12.1 BGP Challenge Lab</td>
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<td>12-5</td>
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<td>Skills Based Practice Test</td>
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<td>Chapter 9 Test</td>
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<td>12-12</td>
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<td>Final Exam (Skills Based)</td>
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<td>Final Exam (Written)</td>
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Department of Engineering & Technology
Computer Engineering Technology (Networking)

Rules and Comments

- **Absolutely no food or drinks** are allowed in the classrooms or laboratories.
- All Assignments (Homework, Pre-labs, and Lab reports) are due at the beginning of each class period.
- Student must be ready to perform the required laboratory exercises upon the arrival to the lab.
- **Lab Approval** – All lab exercises must be approved and signed by the instructor or lab personnel. Labs without signature will not be accepted. To receive credit for the work, the lab record must be turned in at the final exam week. Student is responsible for the lab sheet and will **NOT** be given credit if the lab sheet is lost. **All labs must be done during class or during open lab hours! Credit will not be given for labs done off campus.**
- "**Lab No Show Policy**" 20 points will automatically be deducted from the lab report relating to the experiment that was not performed during the established lab portion of the class. **More than 3 "Lab No Shows"** could result to an automatic withdrawal from the course.
- All exams are **closed book and closed notes** unless stated otherwise.
- More than three unexcused lecture absences could result in grade **F** or Withdrawal from the course.
- Final exam is comprehensive. **Failing to take the final exam will result in grade F.**
- It is the student’s responsibility to withdraw from the course. Any withdrawal after the withdraw deadline could result in **WF.**
- **Beepers**, and **Cellular phones** must be turned off or put on silent mode during the class periods.
- No make-up labs, Quizzes, Homework, or exams are permitted unless prior arrangement with the instructor has been made.
- If the student is absent or has missed any part of the class, then it is the student’s responsibility to obtain the missed information from the instructor or other students.
- You must satisfactorily complete all the course requirements in order to receive a passing grade. The requirement could include;

**In-class requirements** (Exams, Quizzes, Homework, & Projects).
**Laboratory requirements**. (Hands-on Experiments, Lab Reports, and Lab Final Exam).

- **Disruptive Behavior:** Any student engaging in disruptive behavior will be advised on the first offense and will be **dropped** from the course on the second offense.

- No surfing the net, checking e-mail, or chat room is permitted during the class/lab periods. The instructor has the right to dismiss the student from the class or course.
Cheating is prohibited. Any student caught cheating, the instructor has the right to withdraw the student from the class and recommend expulsion from the program.

**Important Dates**

<table>
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<tr>
<th>Date</th>
<th>Event</th>
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<tr>
<td>Sep 2</td>
<td>Withdraw/Refund</td>
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<tr>
<td>Sep 1 and 16</td>
<td>Classes Do Not Meet</td>
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<tr>
<td>Oct 7</td>
<td>Faculty Work Day (Classes Do Not Meet)</td>
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<td>Oct 7</td>
<td>College Night</td>
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<td>Oct 31</td>
<td>Withdrawal Deadline for a “W” Grade</td>
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<tr>
<td>Nov 26-30</td>
<td>Classes Do Not Meet</td>
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<tr>
<td>Dec 13-19</td>
<td>Final Exam Week</td>
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**Graduation**

The following are some steps that you should follow:

1. Apply for graduation at Record Office in SSB room 204.
2. Make sure that you have met all the graduation requirements.
3. Before the start of your final semester submit an unofficial degree audit (use Atlas) to the program director Nasser Hedayat for evaluation.
Required/Optional Equipment

For your information both CET and EET laboratories are equipped with all the necessary software and equipment that can be utilized during the class and open lab times.

Required materials/equipment

- Textbooks and laboratory manuals for the registered classes.
- Scientific calculator such as Casio **fx-115W Plus or equivalent**.
- Digital Kit (available at VCC bookstore).
- Network Cable Kit for CET 2486C(available at VCC bookstore).

Optional Materials/Equipment

The following are some materials/equipment that are optional, and may enhance learning and education. To repeat the lab assignments outside the college, students should have access to the following materials/equipment.

- MultiSim simulation software
- 500 MHz Pentium III computer with Windows 2000 Server OS, 4 gigabytes hard disk, and 96 MB RAM.
- One network card (3Com 3c905).

**Note:** Computer Engineering Technology students need access to the following additional equipment.

- 500 MHz Pentium III computer with Windows 2000 Server OS, 4 gigabytes hard disk, and 96 MB RAM.
- Two network cards (3Com 3c905).
- Three 6’ cat 5 network cables w/RJ-45 connectors
- One 4- port hub with RJ-45 connectors.
- Router and Switch Simulation Program

If you have any question or concern feel free to contact:

Nasser Hedayat, Program Director
Building 9 room 118
(407) 582-1312
e-mail: nhedayat@valenciacc.edu
Computer Engineering Technology (Networking)
Cisco Specialization

CET 2179C
A+ Concept Software (3)

CET 2178C
A+ Concept Hardware (3)

CET 2486C
Local Area Network (3)

EET 1214C
Introduction To Eng. Tech (2)

MTB 1329
Math for Electronic. (3)

ENC 1101 English Comp.1 (3)

CET 2588
Network Plus (4)

CET 1600C
Cisco Network Fund. (4)

EET 2330
Intro to Transmission lines (recommended degree elective)

CET 2112C
Digital Sys. 1 (3)

General Electives

CET 2588
Network Plus (4)

CET 1610C
Cisco Router Tech . (4)

Degree Electives

CET 2113C
Digital Sys. 2 (3)

General Electives

CET 2615C
Cisco Adv. Router Technology (4)

Degree Electives

CET 2620C
Cisco Projects in Routing Design (4)

Complete any remaining degree electives

Complete any remaining general Electives
## Electronic Engineering Technology and Computer Engineering Technology (Networking) Recommended Degree Electives

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<thead>
<tr>
<th>Recommended Course</th>
<th>Credit Hours</th>
<th>Prerequisite</th>
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<td>EET 2330 Introduction to Transmission Lines</td>
<td>3</td>
<td>MTB 1329 Mathematics for Electronics</td>
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<tr>
<td>EST 2220C Introduction to Fiber Optics</td>
<td>3</td>
<td>EET 2330 Introduction to Transmission Lines</td>
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<tr>
<td>EST 2221C Introduction to Electro-Optical Devices</td>
<td>3</td>
<td>EST 2220C Introduction to Fiber Optics</td>
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<tr>
<td>CET 2786 Wide Area Network</td>
<td>3</td>
<td>CET 286C Local Area Network</td>
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<tr>
<td>CET 2123C Fundamentals of Microprocessors</td>
<td>4</td>
<td>CET 2113C Digital System II</td>
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<tr>
<td>CET 2811 Microsoft Windows XP</td>
<td>4</td>
<td>CET 2252C A+ Concept Hardware CET 286C Local Area Network</td>
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<tr>
<td>CET 2810 Ms Exchange 2000 Server</td>
<td>4</td>
<td>CET 2792 MS 2000 Server</td>
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<tr>
<td>CET 2812 SQL Server 2000 Administration</td>
<td>4</td>
<td>CET 2794 MS 2000 Directory Services</td>
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<tr>
<td>Any other Valencia courses with CET course prefix</td>
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<td>See college catalog</td>
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For further information please consult with your instructors.