Course Title & credit hours: CET 1610C Cisco Router Technology; 3 credit hours

Catalog Course Description: Prerequisites: CET 2178C and CET 2486C. This course is designed to prepare students to apply and understand the basics of networking hardware. This course covers the beginning router configurations, routed and routing protocols, and an introduction to LAN switching. This is the second of a four-part series designed to prepare students for the Cisco Certified Networking Associate exam. (Special Fee: $56.00)

Class Time and Location: TBA

Textbook: You’ll have free access to the online curriculum (including the textbook). You can also use the following book as an excellent additional resource: CCENT/CCNA ICND1 200-105 Official Cert Guide

Lab manual: free online access

Professor’s Information:
Name: Soheyla Nakhai
Office: West Campus Building 11 Room 311
Phone: (407) 582-1476
Email: snakhai@valenciacollege.edu
Office Hours: TBA

CCNA Certification Exam
https://learningnetwork.cisco.com/community/certifications

Cisco Academy Web Site
https://cisco.netacad.com/

User Password: password should be a minimum of 8 characters and must include upper & lower case letters and numbers.
Example: John_1834
Lab Procedures
Will be done in lab 11-264 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 Exams
Will be taken at home. Each exam will be activated for a certain window which will be agreed upon by the students and the instructor. When a chapter exam is started, it must be completed. Incomplete exams will count as a ZERO. Please make sure that you take the chapter exam within the specified window. Expired chapter exams will not be reactivated.

Homework Assignments
To get the full credit, you must submit your homework before the due date. I will accept late assignments up to 3 days past due date, however I’ll deduct 20% from the grade.

You are strongly encouraged to start on your homework as early as possible to accommodate unforeseen circumstances such as computer problems, Internet problems, or power outages. If any of those problems persists, please use the on-campus NET laboratory to complete and submit your assignments.

Grading System
Homework -------------------------------------------------------------- 30%
Chapter Exams ---------------------------------------------------------- 10%
Labs & attendance ------------------------------------------------------- 5%
Midterm Exam -------------------------------------------------------------15%
Hands-on Skills Exam (must pass with 60% or higher)------ 20%
Final Exam--------------------------------------------------------------- 20%

A(90-100), B(80-89), C(70-79), D(60-69), F(Less than 60)
### Disclaimer:
Course content, labs, and assignments are subject to change at any time at the instructor’s discretion. The following is a tentative schedule:

<table>
<thead>
<tr>
<th>WEEK</th>
<th>Chapter</th>
<th>DESCRIPTIONS</th>
<th>Homework and chapter exams</th>
</tr>
</thead>
</table>
| 1    | 1       | Introduction & Syllabus | Lab Environment  
Routing Concepts  
- Intro to Packet Tracer  
- Review subnetting - *Be sure to watch my video tutorial on the Cisco Academy web site under “Modules”*  
Reading assignments: chapters 1 & 2  
Homework #0  
Homework #1.1 & 1.2  
Chapter 1 exam |
| 2    | 2       | Static Routing | *Be sure to watch my video tutorial on the Cisco Academy web site under “Modules”*  
Homework #2.1; 2.2; and 2.3 |
| 3    | 2&3     | Static Routing  
Dynamic Routing | 2.2.2.5 - Lab – Configuring IPv4 Static and Default  
Chapter 2 exam |
| 4    | 3       | Dynamic Routing | 3.2.1.9 - Lab – Configuring Basic RIPv2  
Homework #3.1  
Chapter 3 exam |
| 5    | 4       | Switched Networks | Chapter 4 exam |
| 6    | 5       | Switch Configuration | *Be sure to watch my video tutorial on the Cisco Academy web site under “Modules”*  
Homework #5.1; 5.2; and 5.3  
Chapter 5 exam |
| 7    | 6       | VLANs | *Be sure to watch my video tutorial on the Cisco Academy web site under “Modules”*  
Homework #6.1; 6.2; 6.3, 6.4  
Chapter 6 exam |
| 8    | 7       | Access Control Lists | Homework #7.1; 7.2 and 7.3  
Chapter 7 exam |
| 9    |         | Midterm Exam (closed book, chapters 1-6) | |
| 10   | 10      | Device Discovery, Mgmt., and Maintenance | Homework #10.1  
Chapter 10 exam |
<table>
<thead>
<tr>
<th>WEEK (15)</th>
<th>Chapter</th>
<th>DESCRIPTIONS</th>
<th>Homework and chapter exams</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>8</td>
<td>DHCP</td>
<td>Homework #8.1 Chapter 8 exam</td>
</tr>
<tr>
<td>12</td>
<td>9</td>
<td>NAT for IPv4</td>
<td>Be sure to watch my video tutorial on the Cisco Academy web site under “Modules” Homework #9.1 and 9.2 Chapter 10 exam</td>
</tr>
<tr>
<td>13</td>
<td></td>
<td>Review for Skill exam</td>
<td></td>
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<tr>
<td>14</td>
<td></td>
<td>Skill-based Exam (closed book) – in class</td>
<td></td>
</tr>
<tr>
<td>At the West campus testing center</td>
<td>Final Exam (closed book &amp; comprehensive) at the testing center**</td>
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</tbody>
</table>

** Please contact the testing center at 407-582-1323 for information about their hours of operation. Valid Valencia photo ID REQUIRED for testing!

Note: All assignments and chapter exams are accessed via Cisco Academy website at: http://cisco.netacad.com/

**Student learning outcomes**

Student will be able to:
- Describe and discuss the features, operations, and characteristics of the Cisco Internetwork Operating System
- Configure a router /switch with basic setup commands
- Understand the concepts of static and dynamic routing
- Understand how Routing Information Protocol works
- Configure different routing protocols
- Use proper methodologies to troubleshoot Cisco router/switch configurations
- Understand the role of the router in securing a network, using Access Control Lists
- Configure a router as a DHCPv4 server and client
- Configure a stateless and stateful DHCPv6 for a small to medium-sized business.
- Configure static and dynamic NAT

**Student Core Competencies**

**Think**—Critical thinking is a vital skill for IT professionals. You need to think clearly, critically, and creatively in workplace settings. You need to be able to:
- Analyze data, integrate, and evaluate information quickly and correctly to be able to meet the needs of your clients and the profession
• Draw well-supported conclusions
• Revise conclusions consistent with new observations, interpretations, or reasons

**Value**—Making reasoned value judgments and responsible commitments are a part of being a network engineer professional. You need to:
• Recognize values as expressed in attitudes, choices, and commitments
• Distinguish among personal, ethical, aesthetic, cultural, and scientific values
• Employ values and standards of judgment from different disciplines
• Evaluate your own and others’ values from individual, cultural, and global perspectives
• Articulate a considered and self-determined set of values

**Communicate**—The ability to accurately receive and relay information is another important skill for IT professionals. You need to:
• Identify own strengths and need for improvement as a communicator
• Employ methods of communication appropriate to audience and purpose
• Evaluate the effectiveness of own and others’ communication

**Act**—IT professionals must use all their technical skills and knowledge in order to act purposefully, reflectively, and responsibly:
• Apply disciplinary knowledge, skills, and values to the workplace and beyond
• Implement effective problem-solving, decision-making, and goal setting strategies
• Act effectively and appropriately in personal and professional settings
• Assess the effectiveness of personal behavior choices
• Respond appropriately to changing circumstances

**Tips on How to do well in Class:**
• Attend class and participate.
• Start your assignments early.
• Take notes. Then read them as often as you can. There is a good chance that you will be able to recall and use the information that you have seen repeatedly.
• Be sure to read the book and take notes on key terms in each chapter. Specifically, write down all commands and their purpose as you read each chapter. This will be very helpful when you are working on your assignments.
1. **Absolutely no food or drinks** are allowed in the classrooms or laboratories.

2. You must use a computer with reliable internet access because excuses or failure to complete course work due to computer error will not be permitted.

3. All labs must be done during class hours! Credit will not be given for labs done off campus.

4. **Missing more than three weekly assignments** (homework/chapter exam) will count as 3 absences and will result in grade F or withdrawal from the course.

5. **More than three absences will result in grade F or withdrawal from the course.**

6. Final exam is comprehensive. **Failing to take the final exam will result in grade F.**

7. **It is the student’s responsibility to withdraw from the course.**

8. Cellular phones must be turned off or put on silent mode during the class periods.

9. No make-up labs, Homework, or exams are permitted unless prior arrangement with the instructor has been made.

10. 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.

11. You must satisfactorily complete all the course requirements in order to receive a passing grade. The requirement could include:

    ✅ Exams, Homework Assignments
    ✅ Hands-on Laboratory Experiments and Final Skill-based Exam

12. **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.

13. **Computer use is remotely monitored;** any student using computers inappropriately may be subject to dismissal from class or banishment from the lab. Subsequent offense may be sent to the campus administration for further disciplinary action.

14. No surfing the net, checking e-mail, or chat room is permitted during the class/lab periods or while taking exams. The instructor has the right to dismiss the student from the class or course.

15. 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.
**Expected Student Conduct**
Valencia 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 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).

**For Help:**
- You can contact me through snakhai@valenciacollege.edu. I’ll return emails within 24 hours. If you would like to talk to me, you can call me at the number listed above - if I am not in my office, please leave me a message along with your name and I’ll return your call as soon as I can.
- For Blackboard technical support, contact the Valencia Online Support Center at: 407 582-5600.
- West campus testing center – please contact them at 407-582-1323 for information about their hours of operation. Valid Valencia photo ID REQUIRED for testing!
Important Dates
http://valenciacollege.edu/calendar/

Graduation
How do I apply for Graduation?

Online Student Assessment of Instruction
As part of our continuing goal to provide the best possible instruction for Valencia College students, the student evaluation of instructor form is now available online.

On a completely anonymous basis, all students are invited to complete this online form. To do so, go into Atlas, click on My Courses then click on the box at the right that says ‘Assessment Survey’. You will be able to submit one assessment form per class. After that, the form will no longer be available to you.

Please set aside some time toward the end of the semester to complete the assessment. By doing so, you will assist the instructor in assessing the effectiveness of his/her teaching methods and techniques. Thank you for your feedback.