



# COMMUNITY COLLEGE OF RHODE ISLAND

## Networking 2 CNVT 1820 Section 001 Spring 2023

**Instructor** John Mowry  
**Telephone** 401-825-2138  
**E-mail** [jmowry@ccri.edu](mailto:jmowry@ccri.edu) If you put @[my.ccri.edu](mailto:my.ccri.edu), you will be sending an email to a student at CCRI and not to me. Any time you want to email me for this class, you **must** have **CNVT-1820-001** in the subject. If you do not do this, I may not give you a response within 24 hours. I do not answer emails between 9 pm and 8 am on Monday to Saturday; or on weekends at any time.

**Office Hours** See Office Door (Knight Campus Office 2126)  
**Class Sections** 001 Monday and Wednesday 2:00 PM-3:50 PM, starts 1/23 ends 5/10  
**Credit Hours** 3 Credit Hours, 2 Lecture Hours & 2 Laboratory Hours per week, based on a fifteen-week schedule.

**Administrative Assistant** Donna Scattone (825-2155)

### Instructional Material and Web Sites

- 1 CCRI Lesson Web Site [www.netacad.com](http://www.netacad.com) (Switching, Routing, and Wireless Essentials 7.02)
- 2 Cisco Academy Assessment Web Site <http://netacad.com>
- 3 J Mowry CCRI Website [https://www.ccri.edu/faculty\\_staff/comp/jmowry](https://www.ccri.edu/faculty_staff/comp/jmowry)
- 4 Blackboard [www.blackboard.ccri.edu](http://www.blackboard.ccri.edu) Material including PowerPoint slides and Grading will be also available here. Detailed material as well as full-instructional material will be available on the Cisco Netacad website listed above. All exams will be administered through the Netacad website.

## Mission of the Computer Science Department:

The mission of the Computer Studies and Information Processing Department at the Community College of Rhode Island is to provide high quality education in the areas of computer science and information technology to a diverse student population. We offer programs of study that provide our students with the skills necessary for transfer, career success, and lifelong learning. With programs in: Cybersecurity, Computer Support Specialist, Networking Technology, Computer Programming, and Web Technologies we offer a variety of options in the fields of computer science and information technology.

## Course Description:

Switching, Routing, and Wireless Essentials (SRWE) covers the architecture, components, and operations of routers and switches in small networks and introduces wireless local area networks (WLAN) and security concepts. Students learn how to configure and troubleshoot routers and switches for advanced functionality using security best practices and resolve common issues with protocols in both IPv4 and IPv6 networks.

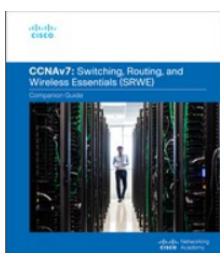
**Course Delivery Mode:** The course is comprised of both Lecture and Laboratory. There will be both an on-line final as well as a Practical, Hands-On final. All exams will be taken In-Person.

**Course Expectations:** Students are to follow the rules and regulations as outlined in the Student Handbook, available on-line at:

[http://www.ccri.edu/advising/student\\_services/handbook.html](http://www.ccri.edu/advising/student_services/handbook.html)

## Additional Learning Material:

Textbook, (Not Required) (All reading material is available on the Netacad website.)



### Switching, Routing, and Wireless Essentials Companion Guide (CCNAv7)

By Cisco Networking Academy

Published Aug 18, 2020 by Cisco Press. Part of the Companion Guide series.

- ISBN-10: 0-13-672935-5
- ISBN-13: 978-0-13-672935-8

## Grading Policies

### Skills:

Journal-Entries	5%	Due: April 26, 2023 @ 2:00 PM
Labs and Class	10%	
Participation		
Practical Final	30%	
Case-Study	15%	Due: April 24, 2023 @ 2:00 PM

### Academic:

Quizzes	10%
Final	30%

**Final Grades:** Final grades will be calculated using a mathematical scale utilizing statistical Standard-Deviation methods. **The following chart is for reference purposes only!** Your instructor reserves the right to evaluate and adjust final grades.

### Grading Scale:

Percentage	Letter Grade
94% - 100%	A
90% - less than 94%	A-
87% - less than 90%	B+
84% - less than 87%	B
80% - less than 84%	B-
77% - less than 80%	C+
70% - less than 77%	C
67% - less than 70%	D+
60% - less than 67%	D
Below 60%	F

**Verification of Enrollment:** Per federal financial aid regulations, CCRI is required to verify student enrollment. All faculty members are required to complete a verification of enrollment per the dates in the College Calendar. Students can confirm enrollment through attendance at any academically related activity, a sign-in sheet will be available each class, or by emailing me explaining why you have not attended class or completed the labs in the first week.

### Incomplete Grade:

This temporary grade designation is awarded at the end of a course. It is awarded only when a student is **PASSING**, has completed at least 75 percent of the course and is unable to complete the course due to extenuating circumstances (e.g., illness, death, unforeseeable accident, unavoidable circumstance).

### **Late Assignments:**

Since this course would meet 4-hours in person and have 8-hours of reading or homework per-week, you are expected to be putting in 12-hours on this course per college policy. All assignments to be turned in to the instructor will have a due-date prescribed and late assignments will be graded at 75% accordingly at the discretion of your instructor.

### **Course Outcomes:**

**As a result of this course, a student will be able to:**

- Troubleshoot and configure Virtual LANs (VLANs) and Inter-VLAN routing applying security best practices
- Configure redundancy on a switched network using Spanning Tree Protocol (STP) and EtherChannel
- Explain how to support available and reliable networks using dynamic address allocation in IPv4 and IPv6 and first-hop redundancy protocols
- Evaluate Wireless LANs (WLANs) using a Wireless LAN Controller (WLC) and L2 security best practice
- Modify switch security to mitigate LAN attacks
- Configure IPv4 and IPv6 static routing on routers

### **Time Management**

1. Course will meet for two (2) Lecture Hours and, two (2) laboratory hours per week of instruction. Based on a 15-week schedule. Shorter courses will meet respective to the number of class meetings
2. Course will meet for sixty (60) hours of combined instruction and laboratory exercises.
3. Students are expected to spend an equal amount of time (60 hours) in reading the curriculum, and studying related material in addition to the required lecture/laboratory.
4. All Packet Tracer lab activities are to be completed as homework assignments

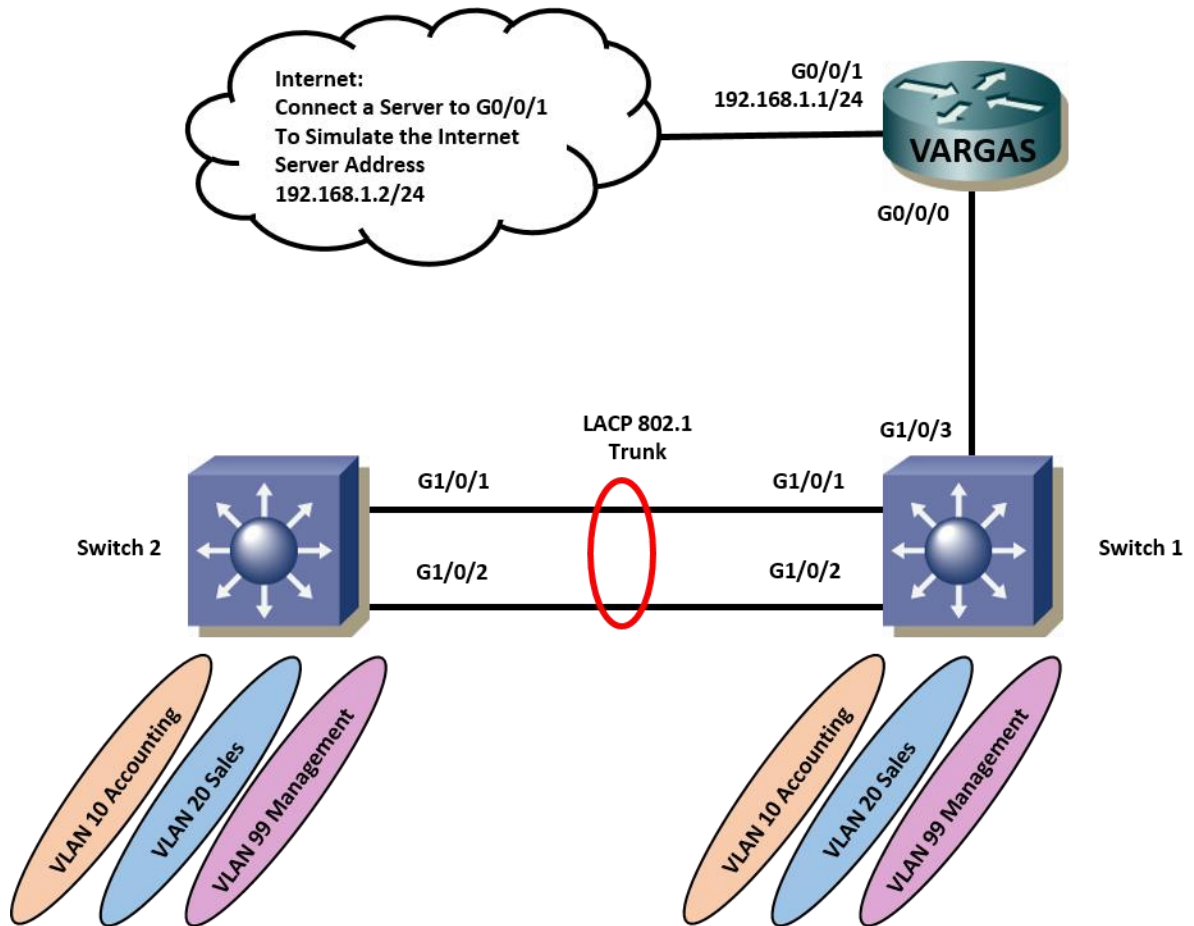
### **Practical Exam**

1. The practical exam will encompass a majority of concepts and procedures developed during the laboratory experiments and required readings.
2. The practical exam will be totally "hands-on" including routing and switching equipment as well as IP Addressing and programs specifically related to the remote configuration of networking devices.
3. Absolutely no forms of electronic media or other forms of notes or assistance are permitted.

## Case Study:

Students will work in assigned groups to complete the case study which includes many of the topics covered within this course. Each group will present their working network prior to the completion of the course.

## CNVT 1820 - Case Study



VLAN 1 Disabled

VLAN 99 Management / Native 10.10.99.3/24

VLAN 10 Accounting 10.10.10.0/24

VLAN 20 Sales 10.10.20.0/24

VLAN 1 Disabled

VLAN 99 Management / Native 10.10.99.2/24

VLAN 10 Accounting 10.10.10.0/24

VLAN 20 Sales 10.10.20.0/24

	VLAN 10	VLAN 20	VLAN 99	VLAN 1	Trunk
Switch 1	G1/0/9- G1/0/10	G1/0/11- G1/0/12	G1/0/23 - G1/0/24	All Remaining unused Ports	G1/0/3, to Vargas G1/0/1, G1/0/2
Switch 2	G1/0/9- G1/0/10	G1/0/11- G1/0/12	G1/0/23 - G1/0/24	All Remaining unused Ports	G1/0/1, G1/0/2

## Objectives

Complete the following tasks throughout the Case Study:

- Router configuration
- Interface *GO/0/1* on the Vargas router
- Sub-interfaces on *GO/0/0* on the Vargas router
- Switches and hosts configuration
- Basic switch configuration (Hostname, passwords, MOTD, etc....)
- Configure VLANs on the switches
- Configure VLAN Trunking between Switches with LACP EtherChannel and Trunking between Switch1 and the Vargas router.
- Verify Connectivity

## Configuration Tasks

### Configure interfaces

- Configure interfaces *GO/0/1* on router, connect a Server to the interface to simulate the Internet. Use IPv4 Address 192.168.1.1/24 for *GO/0/1* and 192.168.1.2/24 for the Server
- Configure *GO/0/0* (3) Sub-interfaces on Vargas, use first IP address from each related subnet.

### Configure a Default Route

Configure a default route to the Internet on the Vargas router.

### Basic Switch Configuration

Use the following IP addresses to configure the switches:

- Configure Switch 1 with the VLAN 99, IP address of 10.10.99.2/24
- Configure Switch 2 with the VLAN 99, IP address of 10.10.99.3/24
- Configure both switches with the default gateway address of 10.10.99.1

### VLAN Configuration on Vargas

Configure the Vargas *GO/0/0* interface to trunk, allow for VLAN 10, VLAN 20 and VLAN 99. (VLAN 99 is Native, with 802.1q encapsulation).

### Configure VLANs on the Switches

Configure Switch 1 and Switch 2 with the following VLANs.

- Create VLAN 10 with the name **Accounting**
- Create VLAN 20 with the name **Sales**
- Create VLAN 99 with the name **Management/Native**

Use the following values to configure ports for VLANs on Switch 1:

- Configure the interfaces *G1/0/9* and *G1/0/10* on VLAN 10
- Configure the interfaces *G1/0/11* and *G1/0/12* on VLAN 20
- Configure interfaces *G1/0/23* and *G1/0/24* on VLAN 99
- Configure *G1/0/3* as a 802.1 Trunk link to the Vargas router
- All other ports on Switch 1 are in VLAN 1, shut down all unused ports

Use the following values to configure ports for VLANs on Switch 2:

- Configure the interfaces *G1/0/9* and *G1/0/10* on VLAN 10
- Configure the interfaces *G1/0/11* and *G1/0/12* on VLAN 20
- Configure interfaces *G1/0/23* and *G1/0/24* on VLAN 99
- All other ports on Switch 2 are in VLAN 1, shut down all unused ports

### **Configure an LACP EtherChannel**

Configure the link between S1 and S2, using ports *G1/0/1* and *G1/0/2*, as an LACP EtherChannel

### **Configure VLAN Trunking**

Use the following values to configure VLAN Trunking on Switch 1 and 2:

- Configure Trunking between Switch 1 and Switch 2 with 802.1q encapsulation using port *G1/0/1* and *G1/0/2* on both switches.
- Configure Switch 1 for Trunking between Switch 1 *G1/0/3* and port *G0/0/1* on Vargas with 802.1q encapsulation.
- Native VLAN is 99 on trunks.

### **Configure DHCP services on the Vargas router.**

DHCP should provide services to the following LANs hosts:

- Accounting VLAN 10 and Sales VLAN 20, Management hosts should be configured manually (no DHCP).
- Exclude the first 10 IP addresses from each pool (to be used for printers and servers)
- Configure hosts in VLAN 10 and 20 to obtain its IP address automatically, have one attached host in each VLAN. Hosts in VLAN 99 should be configured manually.

DHCP should pass the following parameters to the hosts:

- IP address and Subnet Mask
- Default Gateway
- DNS address (192.168.1.2)
- Domain Name case-study.com

### **Configure Access List services on the Vargas router.**

- Construct and place an access list that will allow only the Sales and Accounting VLANS to access the Internet.
- Permit only return traffic (established) and echo reply traffic coming from the Internet.
- Place the ACL's in the appropriate places.

### **Verify Connectivity**

All routers and switches should be able to ping the interfaces of all other devices. You should also be able to contact the Server at address 192.168.1.2



## Journal-Entries:

The Journal is your **Notebook**. The Notebook is to be **Hand-Written** and presented to your instructor on the date specified. The Notebook must have your name clearly printed on the front cover, either inside or outside, or if using a binder on the first page.

## Examinations

1. All exams, excluding the practical exam, will be a combination of multiple choice, fill-in the blank, matching as well as simulations.

## Other Policies

1. The student expected to complete the On-Line lessons outside of class time.
2. All quizzes must be taken in class and will not be available from the student web site
3. After the listed due date, late submissions (up to one week) will be graded at 75%
4. Assignments submitted more than one week after the listed due date will receive a grade of zero.
5. All assignments must be completed using a word processor.
6. Students are responsible to see the instructor about any work missed due to absence.
7. Students who miss a quiz must take the quiz within two classes of the original quiz date.
8. Students are expected to participate as a member of teams
9. Students must pass both the Skills based portion in addition to the Academic portion of the curriculum to pass the course.
10. Student's final grade can only raise one letter grade above the on-line final exam score based on other class assignments.
11. Students are allowed a **maximum** of three (3) re-takes of chapter quizzes per the semester.
12. All re-takes must be completed **prior** to the final exam, **without exception**.

## Services for Students with Disabilities:

Any student with a documented disability may arrange reasonable accommodations. As part of this process, students are encouraged to contact the office of Disability Services for Students as early in the semester as possible (<http://www.ccri.edu/dss/index.shtml>).

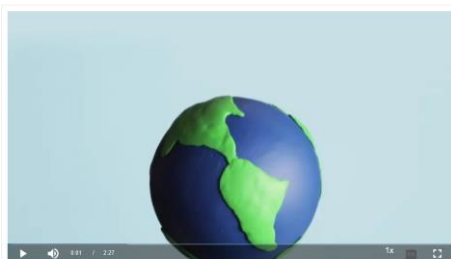
### Enabling Closed Caption:

All embedded videos on the Cisco Academy website have the ability to display closed captioning in multiple languages. The procedure to enable this feature is as follows:

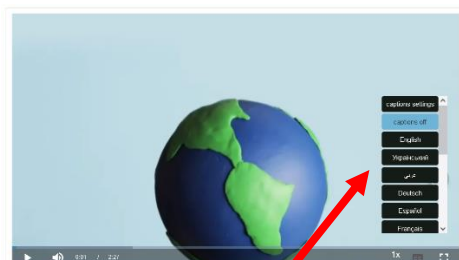
Video - The Cisco Networking Academy Learning Experience

World changers aren't born. They are made. Since 1997 Cisco Networking Academy has been working towards a single goal: the educating and skill building of the next generation of talent required for the digital economy.

Click Play to how Cisco Networking Academy to learn how we use technology to make the world a better place.



Closed Caption Option



When selected the user can choose what language they would like to see displayed from available languages.



After selecting "English" the appropriate text is now displayed. *This needs to be done for each embedded video individually.*

## **Netiquette Policy:**

- Respect others and their opinions. In online learning, students from various backgrounds come together to learn. It is important to respect their feelings and opinions though they may differ from your own.
- Tone down your language. Given the absence of face-to-face clues, written text can easily be misinterpreted. Avoid the use of strong or offensive language and the excessive use of exclamation points. Review before posting to remove any strong language.
- Keep personal discussions off the class discussion board.
- Do not type all capitals, which is difficult to read, and has come to be considered the electronic version of "shouting."
- Do be courteous, even when you disagree, with your instructors as well as your classmates, and always provide clear, logical support for your views.
- Avoid inappropriate material.
- Be forgiving. If someone states something that you find offensive, mention this directly to the instructor. Remember that the person contributing to the discussion might be new to this form of communication. What you find offensive may quite possibly have been unintended and can best be cleared up by the instructor.
- Think before you hit the send button. Think carefully about the content of your message before contributing it. Once sent to the group there is no taking it back. Grammar and spelling errors reflect on you and your audience might not be able to decode misspelled words or poorly constructed sentences. It can also adversely affect your grade.
- Escalate your issues privately via email versus discussion forums. Should you have a disagreement with an instructor or classmate it is best to send an individual email to that individual. Do not argue your case in the discussion forum.
- Brevity is best. Be as concise as possible when contributing to a discussion. Your points might be missed if hidden in a flood of text.

Avoid disciplinary action. Any type of online behavior that is perceived as disrespectful to a fellow student or instructor, or anything that has the potential to be perceived as less than courteous is unacceptable and can be subject to disciplinary action by the Chair of the department. Repetition of such behavior can result in expulsion from the class.

## **Technical Requirements:**

Learning requires certain technical requirements to participate actively and be successful. At the minimum, students must have access to a computer and stable Internet connection. Many courses at CCRI require certain technical requirements to participate actively and be successful. View [Set Up Your Tech](#) to learn more about technical requirements.

**CISCO Netacad:**

Students need a stable Internet connection. Chrome, Firefox, or Edge web browsers can be used. You should clear your web browser cache, which is found in the settings of the web browser. If you do not do this, some of your labs will not work correctly. Chromebooks will not work for your labs. You must have a computer/laptop running Windows 10 or better or MAC.

**CCRI Computer Labs:**

The academic computer lab is available for CCRI students and allows access to computers with required software. Information regarding CCRI's academic computer labs is available at the following link: [Academic Computer Labs](#).

**MS Office 365:**

Microsoft Office 365 is available for all CCRI students to download. This version of Office will be accessible as long as you are actively enrolled at CCRI. It is recommended that students [download MS 365 to their computers](#) for access to MS Word, PowerPoint, and Excel offline. If you use other programs, I may not be able to open the files.

**MS OneDrive:**

[OneDrive](#) is a clouded-based storage system that lets CCRI students store, share and organize files, photos and favorites on Windows servers, and access them from any computer with an Internet connection. You will need and know how to use a computer or mobile device with Internet access. You will also need one of the following web browsers: Edge, Firefox, Chrome, or Safari (Mac only). However, if you put something into OneDrive, you must give me permission to access the file. Once I click on allow, you will get an email that you give permission again before I can view the data.

**Academic Integrity:**

Academic integrity is vital to an institution of higher education. The integrity of your work – that it represents your independent thought and effort and that it properly acknowledges the work of others – is essential to the awarding of credit and to the development of your academic potential. As such, instances of academic dishonesty – cheating, plagiarism, etc., – are extremely serious academic offenses that should not be overlooked. Students should be aware and regularly cautioned that violations of academic integrity may result in suspension or expulsion from the college. For more information, go to the CCRI's Policy on Academic Integrity.

### **Managing Life Crisis and Finding Support:**

Should you encounter an unexpected crisis during the semester (i.e., securing food or housing, addressing mental health concerns, personal safety, managing a financial crisis, and/or dealing with a family emergency, etc.), please reach out to the office of [Community and Social Resources](#). If you are uncomfortable doing so on your own, please know that I can submit a referral on your behalf—just email me or schedule a meeting with me during my office hours.

### **Veteran Services:**

[CCRI Veteran Services Office](#) is committed to being a resource to all VA education beneficiaries. Our mission is to assist veterans, service members, and dependents in the pursuit of their educational goals by maintaining up-to-date information on current programs and resources. Through a combination of experience with the educational system and contacts within the VA, we can help you with any aspect of your higher education.

### **Mental Health Services:**

CCRI is committed to advancing the mental health and wellbeing of its students. If you or someone you know is feeling overwhelmed, depressed, and/or in need of support, services are available.

CCRI has partnered with MySSP (My Student Support Service) to provide 24/7 mental health and well-being support to students, including real-time and scheduled access to professional counselors. All services are confidential and 100% FREE to CCRI students! In addition to MySSP, the Advising and Counseling Center provides one-on-one and group counseling for a variety of problems ranging from typical difficulties students experience (e.g., adjustment to the college setting) to problems associated with acute or long-standing psychological disturbances. For a listing of mental health services on and off campus, visit [Mental Health Services](#).

### **Student Success Center:**

[The Student Success Center](#) provides academic assistance through tutoring services; coordinate information and referrals to college resources; seek ways to improve student satisfaction and retention; and help students achieve their goals. Student Success Center staff members help students understand their individual learning needs, develop better study habits and behaviors, and create plans to achieve their goals. For more information about our services, email [successcenter@ccri.edu](mailto:successcenter@ccri.edu) or visit the [website](#). Watch this [video](#), to learn how to book Free CCRI tutoring appointments through Starfish.

### Writing Center:

The Writing Center offers a variety of free services, including online and in-person help with prewriting, organization, thesis statements, topic sentences, research papers, revision/editing, and answers to questions. Online help at [Writing Center](#) includes:

- Zoom links for Writing Center Virtual Drop-in Tutoring Sessions
- Virtual Zoom appointments
- Email responses to questions and help with papers
- Website content, such as handouts, practice quizzes, literature analysis, PowerPoint presentations, reading resources, and information about research papers (MLA, APA, and Chicago systems)

In-person appointments can be made by contacting [writingcenter@ccri.edu](mailto:writingcenter@ccri.edu). The Writing Center is available at three of our four campuses to assist CCRI students, faculty, and staff members with different kinds of writing and revision tasks.

### Religious & Cultural Observance:

Persons who have religious or cultural observances that coincide with this class should let me know in an email during the first two weeks of the semester. However, if I do not hear from you by the end of the second week of school, I will assume you plan on doing the work for the week.

### Explicit Content:

If you are aware of cognitive or emotional triggers that could disrupt your intellectual or mental health, please let me know so that I can be aware in terms of course content.

### Title IX and Gender Pronouns:

This course affirms equality and respect for all gendered identities and expressions. Please don't hesitate to correct me regarding your preferred gender pronoun and/or name if different from what is indicated on the official class roster. Likewise, I am committed to nurturing an environment free from discrimination and harassment. Consistent with Title IX policy, please be aware that I, as a responsible employee, am obligated to report information that you provide to me about a situation involving sexual harassment or assault.

### Exam Breakdown:

Module	Chapter/Section/Topic Titles	% Coverage
0.1.0	Configure devices using security best practices.	16%
0.2.0	Explain how Layer 2 switches forward data.	28%
0.3.0	Implement VLANs and trunking in a switched network.	33%
0.4.0	Troubleshoot inter-VLAN routing on Layer 3 devices.	23%
Module Group Exam	Switching Concepts, VLANs, and InterVLAN Routing	100%
0.5.0	Explain how STP enables redundancy in a layer 2 network.	55%

0.6.0	Troubleshoot EtherChannel on switched networks.	45%
<b>Module Group Exam</b>	<b>Redundant Networks</b>	<b>100%</b>
0.7.0	Implement DHCPv4 to operate across multiple LANs.	46%
0.8.0	Configure dynamic address allocation in IPv6 networks.	33%
0.9.0	Explain how FHRPs provide default gateway services in a redundant network.	21%
<b>Module Group Exam</b>	<b>Available, and Reliable Networks</b>	<b>100%</b>
0.10.0	Explain how vulnerabilities compromise LAN security.	24%
0.11.0	Implement switch security to mitigate LAN attacks.	28%
0.12.0	Explain how WLANs enable network connectivity.	23%
0.13.0	Implement a WLAN using a wireless router and a WLC.	25%
<b>Module Group Exam</b>	<b>L2 Security and WLANs</b>	<b>100%</b>
0.14.0	Explain how routers use information in packets to make forwarding decisions.	31%
0.15.0	Configure IPv4 and IPv6 static routes.	44%
0.16.0	Troubleshoot static and default routes.	25%
<b>Module Group Exam</b>	<b>Routing Concepts and Configuration</b>	<b>100%</b>

### Final Exam Breakdown:

Chapter/Section/Topic Titles	Items
Configure devices using security best practices.	5%
Explain how Layer 2 switches forward data.	8%
Implement VLANs and trunking in a switched network.	9%
Troubleshoot inter-VLAN routing on Layer 3 devices.	6%
Explain how STP enables redundancy in a layer 2 network.	5%
Troubleshoot EtherChannel on switched networks.	5%
Implement DHCPv4 to operate across multiple LANs.	6%
Configure dynamic address allocation in IPv6 networks.	4%
Explain how FHRPs provide default gateway services in a redundant network.	3%
Explain how vulnerabilities compromise LAN security.	6%
Implement switch security to mitigate LAN attacks.	9%
Explain how WLANs enable network connectivity.	7%
Implement a WLAN using a wireless router and a WLC.	6%
Explain how routers use information in packets to make forwarding decisions.	8%
Configure IPv4 and IPv6 static routes.	8%
Troubleshoot static and default routes.	5%

## Switching, Routing, and Wireless Essentials 7.02

Class	Lesson	Module Group Exam	Subjects	Labs/Projects
Jan 23	1 & 2		<b>Module 1:</b> Basic Device Configuration <b>Module 2:</b> Switching Concepts  <b>Labs to be Submitted via Netacad on or before Midnight January 29, 2023</b>	<b>Lab 1.3.6</b> Packet Tracer - Configure SSH <b>Lab 1.4.7</b> Packet Tracer - Configure Router Interfaces <b>Lab 1.5.10</b> Packet Tracer - Verify Directly Connected Networks <b>Lab 1.6.1</b> Packet Tracer - Implement a Small Network
Jan 25				<b>Lab 1.1.7</b> Basic Switch Configuration <b>Lab 1.6.2</b> Configure basic Router Settings
Jan 30	3		<b>Module 3:</b> VLANs <b>Labs to be Submitted via Netacad on or before Midnight February 5, 2023</b>	<b>Lab 3.2.8</b> Packet Tracer - Investigate a VLAN Implementation
Feb 1				<b>Lab 3.4.6</b> Configure VLAN's and Trunking <b>Lab 3.6.2</b> Implement VLAN's and Trunking
Feb 6	4		<b>Module 4:</b> Inter-VLAN Routing <b>Labs to be Submitted via Netacad on or before Midnight February 12, 2023</b>	<b>Lab 4.3.8</b> Packet Tracer - Configure Layer 3 Switching and Inter-VLAN Routing <b>Lab 4.5.1</b> Packet Tracer - Inter-VLAN Routing Challenge
Feb 8				<b>Lab 4.2.8</b> Configure Router-on-a-Stick Inter-VLAN Routing <b>Lab 4.5.2</b> Implement Inter-VLAN Routing
Feb 13	5	1 (1-4)	<b>Module 5:</b> STP Concepts <b>Labs to be Submitted via Netacad on or before Midnight February 19, 2023</b>	<b>Lab 5.1.9</b> Packet Tracer - Investigate STP Loop Prevention
Feb 15	6		<b>Module 6:</b> EtherChannel	
Feb 20				<b>Lab 6.4.2</b> Implement Etherchannel
Feb 22	7	2 (5-6)	<b>Module 7:</b> DHCPv4	
Feb 27				<b>Lab 7.4.2</b> Implement DHCPv4
March 1	8 & 9		<b>Module 8:</b> SLACC and DHCPv6 <b>Module 9:</b> FHRP Concepts	
March 6				<b>Lab 8.5.1</b> Configure DHCPv6
March 8	10 & 11	3 (7-9)	<b>Module 10:</b> LAN Security Concepts <b>Module 11:</b> Switch security Configuration	
March 20				<b>Lab 11.6.2</b> Switch Security Configuration
March 22	12, 13		<b>Module 12:</b> WLAN Concepts <b>Module 13:</b> WLAN Configuration <b>Labs to be Submitted via Netacad on or before Midnight March 28, 2023</b>	<b>Lab 13.1.10</b> Packet Tracer - Configure a Wireless Network
March 27				<b>Work on Case Study</b>
March 29	14	4 (10-13)	<b>Module 14:</b> Routing Concepts	
April 3				<b>Work on case Study</b>
April 5			<b>Module 15:</b> IP Static Routing <b>Module 16:</b> Troubleshoot Static and Default Routes	



Class	Lesson	Module Group Exam	Subjects	Labs/Projects
April 10				<b>Lab 15.6.2</b> Configure IPv4 and IPv6 Static and Default Routes <b>Lab 16.3.2</b> Troubleshoot Static and Default Routes
April 12		5 (14-16)	Review	
April 17	All chapter exams will be active until April 26, 2023 @ 11:00 AM for retakes, maximum of three (3)			<b>Work on Case Study</b>
April 19				<b>Work on Case Study</b>
April 24			Present Case Study	
April 26			On-Line Final Exam / <b>Notebook</b>	
May 1	Practical Exam			
May 3	Practical Exam			
May 8	Practical Exam			
May 10	Practical Exam			

**This Syllabus is subject to change!**