



COMMUNITY COLLEGE OF RHODE ISLAND

Networking 2

CNVT 1820 Section 104 Fall 2024

Instructor John Mowry
Telephone 401-825-2138

E-mail jmowry@ccri.edu If you put @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-1820-104** 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 104 Tuesday 6:00 PM-9:50PM, starts 9/3 ends 12/17
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 (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
- 4 Blackboard 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.

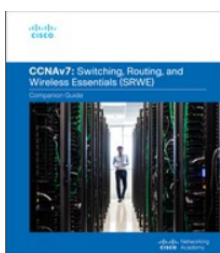
Course Delivery Mode: The course is comprised of both Lecture and Laboratory. There will be both an on-line final as well as a Practical, Hands-On final. All exams will be taken In-Person.

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

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: Evening of assigned Practical Exam
Labs and Class	10%	
Participation		
Practical Final	30%	
Case-Study	15%	Due: November 26, 2024 @ 6:00 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.

Attendance:

Attendance is required and all physical labs will be completed in the CCRI laboratories without exception. In-person labs that are completed on any simulator and not on the physical networking equipment in the CCRI laboratories, will not be accepted. Students are expected to attend all class meetings in-person. **A maximum of three unexcused absences will result in the student receiving a withdrawal, either a WF or a WP, from the course! Students can inform the instructor prior to an absence that cannot be avoided.**

In-Person Laboratory Exercises:

The in-person laboratory exercises **must** be completed on laboratory equipment, either during class time or open laboratory times. If completed during open laboratory times, the exercise will also **require** the laboratory supervisor to sign and date the lab before submittal.

Ninety percent (90%) of the in-person labs must be completed and submitted for course completion.

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

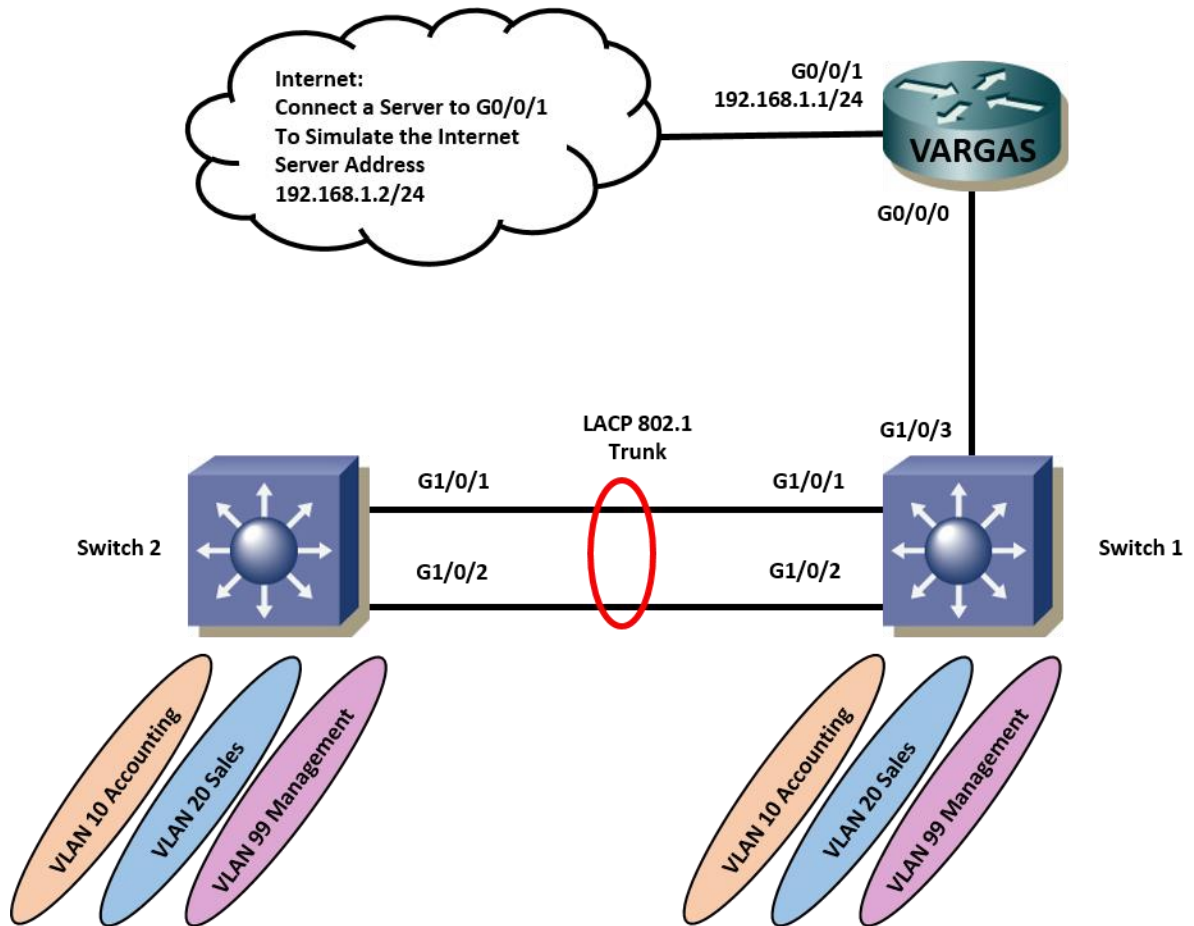
Practical Exam

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:

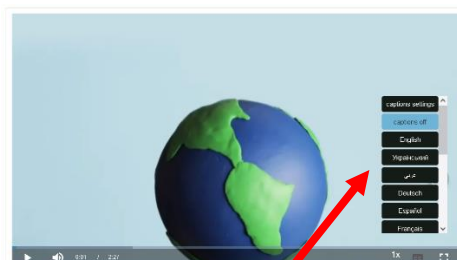
Video - The Cisco Networking Academy Learning Experience

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.

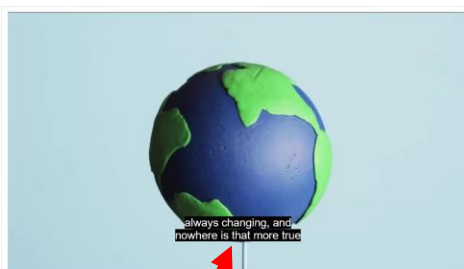
Click Play to how Cisco Networking Academy to learn how we use technology to make the world a better place.



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 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. 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.

Advising:

Your success is the primary focus of the [Advising Center](#). As such, all matriculated students are assigned a trained, professional advisor who will provide support, guidance, and resources to help you navigate your academic journey and maximize your educational experience during your entire time at the Community College of Rhode Island. Recognizing the diverse needs of our student body, your assigned advisor will provide personalized assistance to ensure that your academic, personal, and career goals are met. The services available to you include academic planning and course selection; transfer planning; assistance in understanding college policies and procedures; and referrals to on-and-off-campus resources. Connecting with your

assigned advisor is easy. Log in to your Starfish account (include instructions here). We look forward to partnering with you in your journey towards success at the Community College of Rhode Island.

Counseling:

CCRI offers short term and confidential counseling to help students with mental health concerns. The Personal Counseling and Wellness Office offers students a safe environment for one-on-one appointments, assisting with a variety of concerns related to anxiety, depression, or long-standing psychological obstacles. The Personal Counseling and Wellness Office also assists with connecting students with resources and outside agencies offering long-term counseling services. For a list of mental health services on and off campus, please visit [Personal Counseling and Wellness](#).

Finally, counseling services are offered at our four main campuses (Warwick, Lincoln, Providence, and Newport) M-F 8:00 am to 4 pm. To schedule an appointment, please email us at: counseling@ccri.edu

TELUS Health:

CCRI has also partnered with TELUS Health, a counseling service available to students 24/7, free of charge. TELUS Health offers virtual walk-in's and scheduled appointments, with access to professional counselors. To learn more about TELUS Health, please click the link here: [visit TELUS Health](#)

The Benefits Hub:

The Benefits Hub connects students to on and off campus resources. If students are couch surfing, need groceries, childcare, transportation, or some other form of assistance, please contact: 401.825-1024 (office), or BenefitsHub@ccri.edu 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 office hours.

Tutoring Center:

Students use Starfish to schedule appointments to meet with CCRI tutors and academic coaches. Appointments are offered in-person and online with day, evening, and weekend availability. All services are at no cost to students.

Visit [The Tutoring Center](#) or email tutoring@ccri.edu to learn more about our services.

Connect with a Tutor:

CCRI employs tutors recommended by CCRI faculty to provide tutoring for their courses. Tutoring helps students learn course material for a specific class by clarifying course concepts and getting practice with course materials. Students do not have to be in jeopardy of failing to get help from a tutor. Click [here to watch the video directions](#) on how to schedule appointments through Starfish.

Partner with An Academic Coach:

Academic coaching is a personalized student-coach partnership with appointments tailored to your individual needs. A coach can help you with organizational and study strategies. One-time appointments or a series of consultations throughout the semester are available. Click [here to watch the video directions](#) on how to schedule appointments through Starfish.

Pear Deck Tutor:

Pear Deck Tutor is a private online tutoring company that CCRI has partnered with to supplement our CCRI Tutoring program. It is available 24/7 and students are allowed up to three hours per week at no charge! Students access Pear Deck Tutor through their CCRI Blackboard account.

CCRI Library:

The CCRI Library provides a welcoming environment for individual and collaborative learning. Each campus has a library with access to print and online books, journals, and other resources.

Our catalog and databases can be accessed on campus or off campus. Librarians are available to assist students individually with research questions. We also work with faculty to provide specialized library instruction classes and offer [courses in information literacy and research skills](#).

Public Safety:

The CCRI College Police Department, also referred to as the Campus Police Department, is staffed with full-time, sworn police officers augmented with nonsworn public safety officers and dispatchers. We provide law enforcement services to all four CCRI campuses when the campuses are open and 24/7 services through our HQ's located at the Knight Campus in Warwick.

Our enforcement jurisdiction covers all four CCRI properties. The services we provide for the College community include responses to all emergencies; arrests for criminal violations; police reports; initial criminal investigations occurring on a campus or having a nexus to the College; referral services to outside law enforcement and social agencies; all Clery Act requirements; traffic enforcement, accident investigations and accident reporting on campus.

The College Police Department is also responsible for building and grounds security; College identification access control; lost and found; annual emergency exercises; educational training opportunities concerning public safety; and escorts per request. The CCRI College Police Department is an accredited law enforcement agency with the Rhode Island Police Accreditation Commission and maintains solid, working relationships with all other law enforcement agencies throughout the State of Rhode Island.

Contact us at 401-825-2109 for routine business and 401-825-2000 for on-campus emergencies. 911 is always acceptable for any emergency and will be forwarded to our dispatch center for a quick response.

Civil Rights (Know Your Rights):

Pregnant and Parenting Students:

CCRI is proud to welcome and support pregnant and parenting students on their path to success. If you need an accommodation, excused absence, or other resource or campus support to successfully complete your time at CCRI while pregnant or parenting, please contact the Title IX Coordinator via email at titleixcoordinator@ccri.edu or by phone at (401) 825-1126.

Discrimination and Harassment:

CCRI prohibits students and employees from engaging in discrimination and harassment based on any individual's race, color, creed, national or ethnic origin, gender, gender identity or expression, religion, disability, age, sexual orientation, genetic information, marital status, citizenship status, veteran status, and any other legally protected characteristic.

If you believe you have been subjected to discrimination or harassment, you can report such behavior to the Title IX Coordinator via email at titleixcoordinator@ccri.edu, by phone at (401) 825-1126

[Nondiscrimination Policy and Complaint Procedures](#)

Sexual Harassment and Sexual Misconduct

CCRI prohibits all forms of unlawful sexual harassment and sexual misconduct, which includes (but is not limited to) dating/domestic violence and stalking. If you believe you have been subjected to sexual harassment or sexual misconduct, you can report such behavior to the Title IX Coordinator via email at titleixcoordinator@ccri.edu or by phone at (401) 825-1126.

[Title IX Sexual Harassment Policy and Procedures \(S-17\)](#)

[Nondiscrimination Policy and Complaint Procedures](#)

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%
Module Group Exam	Redundant Networks	100%
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%
Module Group Exam	Available, and Reliable Networks	100%
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%
Module Group Exam	L2 Security and WLANs	100%
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%
Module Group Exam	Routing Concepts and Configuration	100%

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
Sept 3	1 & 2		Module 1: Basic Device Configuration Module 2: Switching Concepts Labs to be Submitted via Netacad on or before Midnight Sept 9, 2024	Lab 1.3.6 Packet Tracer - Configure SSH Lab 1.4.7 Packet Tracer - Configure Router Interfaces Lab 1.5.10 Packet Tracer - Verify Directly Connected Networks Lab 1.6.1 Packet Tracer - Implement a Small Network
Sept 3				Lab 1.1.7 Basic Switch Configuration Lab 1.6.2 Configure basic Router Settings
Sept 10	3		Module 3: VLANs Labs to be Submitted via Netacad on or before Midnight Sept 16, 2024	Lab 3.2.8 Packet Tracer - Investigate a VLAN Implementation
Sept 10				Lab 3.4.6 Configure VLAN's and Trunking Lab 3.6.2 Implement VLAN's and Trunking
Sept 17	4		Module 4: Inter-VLAN Routing Labs to be Submitted via Netacad on or before Midnight Sept 23, 2024	Lab 4.3.8 Packet Tracer - Configure Layer 3 Switching and Inter-VLAN Routing Lab 4.5.1 Packet Tracer - Inter-VLAN Routing Challenge
Sept 17				Lab 4.2.8 Configure Router-on-a-Stick Inter-VLAN Routing Lab 4.5.2 Implement Inter-VLAN Routing
Sept 24	5	1 (1-4)	Module 5: STP Concepts Labs to be Submitted via Netacad on or before Midnight September 30, 2024	Lab 5.1.9 Packet Tracer - Investigate STP Loop Prevention
Oct 1	6		Module 6: EtherChannel	
Oct 1				Lab 6.4.2 Implement Etherchannel
Oct 8	7	2 (5-6)	Module 7: DHCPv4	
Oct 8				Lab 7.4.2 Implement DHCPv4
Oct 15	8 & 9		Module 8: SLACC and DHCPv6 Module 9: FHRP Concepts	
Oct 15				Lab 8.5.1 Configure DHCPv6 Lab 9.1.1 Implement HSRP
Oct 22	10 & 11	3 (7-9)	Module 10: LAN Security Concepts Module 11: Switch security Configuration	
Oct 22				Lab 11.6.2 Switch Security Configuration
Oct 29	12, 13		Module 12: WLAN Concepts Module 13: WLAN Configuration Labs to be Submitted via Netacad on or before Midnight November 11, 2024	Lab 13.1.10 Packet Tracer - Configure a Wireless Network
Oct 29				Work on Case Study
Nov 12	14	4 (10-13)	Module 14: Routing Concepts	
Nov 12				Work on case Study
Nov 19			Module 15: IP Static Routing Module 16: Troubleshoot Static and Default Routes	

Class	Lesson	Module Group Exam	Subjects	Labs/Projects
Nov 19				Lab 15.6.2 Configure IPv4 and IPv6 Static and Default Routes Lab 16.3.2 Troubleshoot Static and Default Routes
Nov 26	NOTE:	5 (14-16)	Review / Present Case Study	
Dec 3	Practical Exam / Final Exam /		Notebook	
Dec 10	Practical Exam / Final Exam /		Notebook	
Dec 17	Practical Exam / Final Exam /		Notebook	

Note: All exams will be active from November 26, 2024 @ 10:00 PM and remain active until December 17, 2024 @ 5:00 PM to allow for three (3) retakes maximum, if needed.

This Syllabus is subject to change!