CCNA 2: ROUTING AND SWITCHING ESSENTIALS (ITCC 1344 6A1)

INSTRUCTOR CONTACT INFORMATION

Instructor:	Susan Joiner
Email:	sljoiner@lit.edu
Office Phone:	409-247-5326
Office Location:	TA 4 Room 103B
Office Hours:	MW 7:30-8:00am; 2:30-4:00pm; TR 7:30-8:00am; 1:30-4:00pm
	F 12:00-2:00pm

CREDIT
3 Semester Credit Hours (2 hours lecture, 4 hours lab)

MODE OF INSTRUCTION
Traditional

PREREQUISITE/CO-REQUISITE:
ITCC 1314: CCNA 1

COURSE DESCRIPTION
Describes the architecture, components, and operations of routers and switches in small networks and introduces wireless local area networks (WLAN) and security concepts; provides an in-depth understanding of how routers and switches operate and are implemented in the LAN environment.

COURSE OBJECTIVES
Upon completion of this course, the student will be able to
- Configure, secure, and maintain routers and switches
- Resolve common issues with routing protocols, virtual LANs, and inter-VLAN routing in both IPv4 and IPv6 networks.
- Configure WLANs.

REQUIRED TEXTBOOK AND MATERIALS
- *Switching, Routing, and Wireless Essentials Companion Guide (CCNAv7)*, by Cisco Networking Academy, Cisco Press, August 2020.
   a. ISBN for print book is 978-0-13-672935-8
   b. ISBN for e-book is 978-0-13-672948-8.

Recommended Textbook and Materials

- [CCNA 200-301 Portable Command Guide, 5th Edition](#)**,** by Cisco Networking Academy, Cisco Press, 2020*. This is the 5*th *Edition, which aligns with the CCNAv7 certification and curriculum.*

    a. ISBN for print book is 978-0-13-593782-2.
    b. ISBN for e-book is 978-0-13-593770-9.

ATTENDANCE POLICY

Three absences are allowed. If a student is tardy to class or departs early three (3) times, it will be equal to one (1) absence. Each absence beyond three absences will result in a 2 point deduction from your final grade.

DROP POLICY

If you wish to drop a course, you are responsible for initiating and completing the drop process by the specified drop date as listed on the [Academic Calendar](#). If you stop coming to class and fail to drop the course, you will earn an "F" in the course.

STUDENT EXPECTED TIME REQUIREMENT

For every hour in class (or unit of credit), students should expect to spend at least two to three hours per week studying and completing assignments. For a 3-credit-hour class, students should prepare to allocate approximately six to nine hours per week outside of class in a 16-week session OR approximately twelve to eighteen hours in an 8-week session. Online/Hybrid students should expect to spend at least as much time in this course as in the traditional, face-to-face class.

COURSE CALENDAR (Subject to change)

DATE	TOPIC	READINGS (Due on this Date)	ASSIGNMENTS (Due on this Date)
Week 1 8/21-8/27	Basic Device Configuration	Chapter 1 See Blackboard Calendar	Packet Tracer 1.3.6 9/17/2023
	Configure Router Interfaces	Chapter 1 See Blackboard Calendar	Packet Tracer 1.4.7 9/17/2023
	Verify Directly Connected Networks	Chapter 1 See Blackboard Calendar	Packet Tracer 1.5.10 9/17/2023
	Implement a Small Network	Chapter 1 See Blackboard Calendar	Packet Tracer 1.6.1 9/17/2023
Week 2 8/27-9/3	Switching Concepts	Chapter 2 See Blackboard Calendar	In Class Work 9/17/2023
Week 3 9/3-9/10	VLANs	Chapter 3 See Blackboard Calendar	Packet Tracer 3.1.4 9/17/2023

	Investigate a VLAN Implementation	Chapter 3 See Blackboard Calendar	Packet Tracer 3.2.8 9/17/2023
Week 3 9/3-9/10	VLAN Configuration	Chapter 3 See Blackboard Calendar	Packet Tracer 3.3.12 9/17/2023
	Configure Trunks	Chapter 3 See Blackboard Calendar	Packet Tracer 3.4.5 9/17/2023
	Configure DTP	Chapter 3 See Blackboard Calendar	Packet Tracer 3.5.5 9/17/2023
	Implement VLANs and Trunking	Chapter 3 See Blackboard Calendar	Packet Tracer 3.6.1 9/17/2023
Week 4 9/10-9/17	Inter-VLAN Routing	Chapter 4 See Blackboard Calendar	Packet Tracer 4.2.7 9/17/2023
	Configure Layer 3 Switching and Inter-VLAN Routing	Chapter 4 See Blackboard Calendar	Packet Tracer 4.3.8 9/17/2023
	Troubleshoot Inter-VLAN Routing	Chapter 4 See Blackboard Calendar	Packet Tracer 4.4.8 9/17/2023
	Modules 1 - 4: Switching Concepts, VLANs, and InterVLAN Routing Exam	Study Guide 1 - 4 See Blackboard Calendar	Exam 1 – 4 9/17/2023
Week 9/17-9/24	STP Concepts	Chapter 5 See Blackboard Calendar	Packet Tracer 5.1.9 10/01/2023
Week 6 9/24-10/1	EtherChannel	Chapter 6 See Blackboard Calendar	Packet Tracer 6.2.4 10/01/2023
	Troubleshooting EtherChannel	Chapter 6 See Blackboard Calendar	Packet Tracer 6.3.4 10/01/2023
	Implement EtherChannel	Chapter 6 See Blackboard Calendar	Packet Tracer 6.4.1 10/01/2023
	Modules 5 - 6: Redundant Networks Exam	Study Guide 5 - 6 See Blackboard Calendar	Exam 5 – 6 10/01/2023
Week 7 10/1-10/8	DHCPv4	Chapter 7 See Blackboard Calendar	Packet Tracer 7.2.11 10/22/2023
	Implement DHCPv4	Chapter 7 See Blackboard Calendar	Packet Tracer 7.4.1 10/22/2023
Week 8 10/8-10/15	SLAAC and DHCPv6	Chapter 8 See Blackboard Calendar	In Class Work 10/22/2023
Week 9 10/15-10/22	FHRP Concepts	Chapter 9 See Blackboard Calendar	Packet Tracer 9.3.3 10/22/2023
	Modules 7 - 9: Available and Reliable Networks Exam	Study Guide 7 - 9 See Blackboard Calendar	Exam 7 – 9 10/22/2023

Week 10 10/22-10/29	LAN Security Concepts	Chapter 10 See Blackboard Calendar	In Class Work 11/12/2023
	Switch Security Configuration	Chapter 11 See Blackboard Calendar	Packet Tracer 11.1.10 11/12/2023
	Switch Security Configuration	Chapter 11 See Blackboard Calendar	Packet Tracer 11.6.1 11/12/2023
Week 11 10/29-11/5	WLAN Concepts	Chapter 12 See Blackboard Calendar	In Class Work 11/12/2023
Week 12 11/5-11/12	WLAN Configuration	Chapter 13 See Blackboard Calendar	Packet Tracer 13.1.10 11/12/2023
	Configure a Basic WLAN on the WLC	Chapter 13 See Blackboard Calendar	Packet Tracer 13.2.7 11/12/2023
	Configure a WPA2 Enterprise WLAN on the WLC	Chapter 13 See Blackboard Calendar	Packet Tracer 13.3.12 11/12/2023
	Troubleshoot WLAN Issues	Chapter 13 See Blackboard Calendar	Packet Tracer 13.4.5 11/12/2023
	WLAN Configuration	Chapter 13 See Blackboard Calendar	Packet Tracer 13.5.1 11/12/2023
	Modules 10 - 13: L2 Security and WLANs Exam	Study Guide 10 - 13 See Blackboard Calendar	Exam 10 – 13 11/12/2023
Week 13 11/12-11/19	Routing Concepts	Chapter 14 See Blackboard Calendar	Packet Tracer 14.3.5 11/03/2023
Week 14 11/19-11/26	IP Static Routing	Chapter 15 See Blackboard Calendar	Packet Tracer 15.6.1 11/03/2023
Week 15 11/26-11/3	Troubleshoot Static and Default Routes	Chapter 16 See Blackboard Calendar	Packet Tracer 16.3.1 11/03/2023
	Modules 14 - 16: Routing Concepts and Configuration Exam	Study Guide 14 – 16 See Blackboard Calendar	Exam 14 – 16 11/03/2023
Week 16	Final Exam	Final Exam See Blackboard Calendar	Final Exam 12/4/2023

COURSE EVALUATION
Final grades will be calculated according to the following criteria:
- Labs   30%
- Study Guides   10%
- Module Tests 30%
- Final Exam   30%

GRADING SCALE

90 – 100 A
80 – 89   B
70 – 79   C
60 – 69   D
0 – 59   F

LIT does not use +/- grading scales

ACADEMIC DISHONESTY
Students found to be committing academic dishonesty (cheating, plagiarism, or collusion) may receive disciplinary action. Students need to familiarize themselves with the institution's Academic Dishonesty Policy available in the Student Catalog & Handbook at http://catalog.lit.edu/content.php?catoid=3&navoid=80#academic-dishonesty.

TECHNICAL REQUIREMENTS
The latest technical requirements, including hardware, compatible browsers, operating systems, etc. can be online at https://lit.edu/online-learning/online-learning-minimum-computer-requirements. A functional broadband internet connection, such as DSL, cable, or WiFi is necessary to maximize the use of online technology and resources.

DISABILITIES STATEMENT
The Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. LIT provides reasonable accommodations as defined in the Rehabilitation Act of 1973, Section 504 and the Americans with Disabilities Act of 1990, to students with a diagnosed disability. The Special Populations Office is located in the Eagles' Nest Room 129 and helps foster a supportive and inclusive educational environment by maintaining partnerships with faculty and staff, as well as promoting awareness among all members of the Lamar Institute of Technology community. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409)-951-5708 or email specialpopulations@lit.edu. You may also visit the online resource at Special Populations - Lamar Institute of Technology (lit.edu).

STUDENT CODE OF CONDUCT STATEMENT
It is the responsibility of all registered Lamar Institute of Technology students to access, read, understand and abide by all published policies, regulations, and procedures listed in the *LIT Catalog and Student Handbook*. The *LIT Catalog and Student Handbook* may be accessed at

www.lit.edu. Please note that the online version of the *LIT Catalog and Student Handbook* supersedes all other versions of the same document.

STARFISH

LIT utilizes an early alert system called Starfish. Throughout the semester, you may receive emails from Starfish regarding your course grades, attendance, or academic performance. Faculty members record student attendance, raise flags and kudos to express concern or give praise, and you can make an appointment with faculty and staff all through the Starfish home page. You can also login to Blackboard or MyLIT and click on the Starfish link to view academic alerts and detailed information. It is the responsibility of the student to pay attention to these emails and information in Starfish and consider taking the recommended actions. Starfish is used to help you be a successful student at LIT.

ADDITIONAL COURSE POLICIES/INFORMATION

Course Policies

1. No food, drinks, use of tobacco products, or vaping products in class.
2. Electronic devices not being used for the class, such as phones and headphones, must be turned off while in class. Any device usage during class may result in a deduction of points on an assignment or test.
3. Do not bring children to class.
4. Certification: If a student passes the certification test that is associated with this class, you will receive an "A" on the final exam and credit for 25% of your labs.
5. A grade of 'C' or better must be earned in this course for credit toward degree requirement.
6. All assignment due dates are indicated in the Blackboard course for this class. Any work submitted after the assigned due date will receive a 10 point deduction.
7. Tests are assigned a due date and must be completed by that date. Tests will not be reactivated after the due date.
8. All assignments must be submitted via Blackboard unless specified by your instructor. Assignments submitted through any other method will receive a "0".
9. Grades for assignments may be accessed through My Grades in Blackboard. Each assignment shows your grade and any grading comments made on your assignment.
10. Chapter Exam grades may be accessed through the Cisco website until they are transferred to the Gradebook in Blackboard.
11. It is the student's responsibility to verify transferred exam grades and ask for corrections if needed.
12. All work is due before the final exam date. Nothing will be graded after the

final exam.

Certification Requirement

CNTT and Cyber Security majors are required to earn certification in one of the following areas prior to graduation.

- A+ Certification
- Network+ Certification
- Security+ Certification
- Linux+ Certification
- Cisco Certified Network Associate (CCNA)

This course covers part of the material to prepare for the Cisco Certified Network Associate v1.0 (CCNA 200-301) certification exam. All three Cisco courses must be completed to cover the material for the CCNA exam. Students are responsible for scheduling and paying for the certification through the LIT Testing Center. More information about the certification can be found online at http://www.cisco.com/c/en/us/training-events/training-certifications/certifications.html.