



Course Information

Course Title	CCNA 3: Enterprise Networking, Security, and Automation
Course Prefix, Num. and Title	ITCC 2420 – CCNA 3: Enterprise Networking, Security, and Automation
Division	Technology & Business
Department	Computer Science
Course Type	WECM Course
Course Catalog Description	Describes the architecture, components, operations, and security to scale for large, complex networks, including wide area network (WAN) technologies. Emphasizes network security concepts and introduces network virtualization and automation.
Pre-Requisites	C or higher in ITCC 1444
Co-Requisites	None

Semester Credit Hours

Total Semester Credit Hours (SCH): Lecture Hours:	4:3:3
Lab/Other Hours	
Equated Pay Hours	4.5
Lab/Other Hours Breakdown: Lab Hours	3
Lab/Other Hours Breakdown: Clinical Hours	0
Lab/Other Hours Breakdown: Practicum Hours	0
Other Hours Breakdown	0

Approval Signatures

Title	Signature	Date
Prepared by:		
Department Head:		
Division Chair:		
Dean/VPI:		
Approved by CIR:		

Additional Course Information

Topical Outline: Each offering of this course must include the following topics (be sure to include information regarding lab, practicum, and clinical or other non-lecture instruction).

- LAN Redundancy
- Link Aggregation
- Wireless
- Adjust and Troubleshoot Single-Area OSPF
- Multiarea OSPF
- EIGRP
- Adjust and Troubleshoot EIGRP
- IOS File Management

Course Learning Outcomes:

Learning Outcomes: Upon successful completion of this course, students will:

1. Configure advanced routing and switching protocols
2. Resolve common issues with routing and switching protocols
3. Identify threats and enhance network security
4. Implement IPv4 Access Control Lists (ACLs)
5. Configure Network Address Translation (NAT) services
6. Explain virtualization, software defined networking, and automation

Methods of Assessment:

Individual Projects

Tests and Quizzes

Lab Assignments

Final Exam

Skills Exam

Required text(s), optional text(s) and/or materials to be supplied by the student:

- CCNA Routing and Switching: Portable Command Guide, 4th Edition, Scott Empson, Cisco Press, ISBN: 978-1-58720-588-0
- USB Flash Drive
- High-speed Internet Connection

Suggested Course Maximum:

16

List any specific or physical requirements beyond a typical classroom required to teach the course.

Computer for each student, Cisco routers, switches, wireless routers, fiber cable tester, Ethernet cable testers.

Class maximum is set because of Cisco equipment within lab.

Version: 11/29/2020

Course Requirements/Grading System: Describe any course specific requirements such as research papers or reading assignments and the generalized grading format for the course.

Course Requirements

Comprehensive Skills Exam -- 20-25%

Comprehensive Final Exam -- 20-25%

Labs/Homework -- 25-30%

Chapter Tests -- 20-25%

Attendance/Participation -- 0-15%

Grading System

100 -90 = A

89 - 80 = B

79 - 70 = C

69 - 60 = D

59 and below = F

Curriculum Checklist:

- Administrative General Education Course** (from ACGM, but not in WCJC Core)

No additional documents needed.

- Administrative WCJC Core Course.** Attach the Core Curriculum Review Forms

Critical Thinking

Communication

Empirical & Quantitative Skills

Teamwork

Social Responsibility

Personal Responsibility

- WECM Course**

If needed, revise the Program SCANS Matrix and Competencies Checklist