



**Course Information**

<b>Course Title</b>	CCNA 4: Connecting Networks
<b>Course Prefix, Num. and Title</b>	ITCC 2413 - CCNA 4: Connecting Networks
<b>Division</b>	Technology and Business
<b>Department</b>	Computer Science
<b>Course Type</b>	WECM Course
<b>Course Catalog Description</b>	WAN technologies and network services required by converged applications in a complex network; enables students to understand the selection criteria of network devices and WAN technologies to meet network requirements.
<b>Pre-Requisites</b>	C or better in ITCC 2412 or ITCC 1478
<b>Co-Requisites</b>	None

**Semester Credit Hours**

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

**Approval Signatures**

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

## 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).

Hierarchical Network Design  
Connecting to the WAN  
Point-to-Point Connections  
Frame Relay  
Network Address Translation for IPv4  
Broadband Solutions  
Securing Site-to-Site Connectivity  
Monitoring the Network  
Troubleshoot the Network

### Course Learning Outcomes:

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

1. Configure and troubleshoot network devices
2. Resolve common issues with data link protocols
3. Resolve common issues with OSPF, EIGRP, and STP in both IPv4 and IPv6 networks
4. Implement virtual private network (VPN) operations in a complex network; implement security best practices.

#### Methods of Assessment:

All outcomes will be assessed by one or more of the following:

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 Portable Command Guide Third Edition by Empson ISBN-9781587204302 Book:9780133381368
- 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. Current CISCO lab configuration allows 16 students.

The course maximum is due to the amount of equipment contained in the class.

**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:

Version: 3/20/2019

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  
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