

Purpose: It is the intention of this Administrative-Master Syllabus to provide a general description of the course, outline the required elements of the course and to lay the foundation for course assessment for the improvement of student learning, as specified by the faculty of Wharton County Junior College, regardless of who teaches the course, the timeframe by which it is instructed, or the instructional method by which the course is delivered. It is not intended to restrict the manner by which an individual faculty member teaches the course but to be an administrative tool to aid in the improvement of instruction.

Course Title - Connecting Networks (CISCO 4)

Course Prefix and Number – ITCC 1479

Department – Computer Science

Division – Technology & Business

Course Type: (check one)

- Academic General Education Course (from ACGM – but not in WCJC Core)
- Academic WCJC Core Course
- WECM course (This course is a Special Topics or Unique Needs Course: Y or N)

Semester Credit Hours #: Lecture Hours #: Lab/Other Hours #: 4:3:3

Equated Pay hours for course – 4.5

| List Lab/ Other Hours |
|--------------------------|
| Lab Hours 3 |
| Clinical Hours 0 |
| Practicum Hours 0 |
| Other (list) 0 |

Course Catalog Description - This course discusses the WAN technologies and network services required by converged applications in a complex network. The course enables students to understand the selection criteria of network devices and WAN technologies to meet network requirements. Students learn how to configure and troubleshoot network devices and resolve common issues with data link protocols. Students will also develop the knowledge and skills needed to implement IPsec and virtual private network (VPN) operations in a complex network.

Prerequisites/Co-requisites –Grade of C or better in ITCC 1475, ITCC 1476 and ITCC 1478

Prepared by: Donna Schilling

Date: 07-19-2015

Reviewed by Department Head: Donna Schilling

Date: 07-19-2015

Accuracy verified by Division Chair: David Kucera

Date: 8/12/15

Approved by Dean or Vice President of Instruction: Leigh Ann Collins

Date: 3-4-16

I. Topical Outline – Each offering of this course must include the following topics (be sure to include information regarding lab, practicum, 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

II. Course Learning Outcomes

| Learning Outcomes | Methods of Assessment |
|---|--|
| <p>Upon successful completion of this course, students will:</p> <ol style="list-style-type: none"> 1. Understand and describe different WAN technologies and their benefits. 2. Understand and describe the operations and benefits of virtual private networks (VPNs) and tunneling. 3. Configure and troubleshoot serial connections. 4. Configure and troubleshoot broadband connections. 5. Configure and troubleshoot IPSec tunneling operations. 6. Monitor and troubleshoot network operations using syslog, SNMP, and NetFlow | <p>All outcomes will be assessed by one or more of the following:</p> <ul style="list-style-type: none"> Individual Projects Tests and Quizzes Lab Assignments Final Exam Skills Exam |

III. Required Text(s), Optional Text(s) and/or Materials to be Supplied by Student.

- CCNA Portable Command Guide Third Edition by Empson ISBN-9781587204302 eBook: 9780133381368
- USB Flash Drive
- High-speed Internet Connection

IV. Suggested Course Maximum - 18

V. List any specific spatial 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

VI. 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 |
| and below | = F |

VII. Curriculum Checklist

- **Academic General Education Course** (from ACGM – but not in WCJC Core)
No additional documentation needed
- **Academic WCJC Core Course**
Attach the Core Curriculum Checklist, including the following:
 - Basic Intellectual Competencies
 - Perspectives
 - Exemplary Educational Objectives
- **WECM Courses**
If needed, revise the Program SCANS Matrix & Competencies Checklist.