Washtenaw Community College Comprehensive Report

CNT 236 Connecting Networks
Effective Term: Fall 2018

Course Cover

Division: Business and Computer Technologies
Department: Computer Instruction
Discipline: Computer Networking Technology
Course Number: 236
Org Number: 13400
Full Course Title: Connecting Networks
Transcript Title: Connecting Networks
Is Consultation with other department(s) required: No
Publish in the Following: College Catalog , Time Schedule , Web Page
Reason for Submission: Course Change
Change Information:
Course title
Course description
Outcomes/Assessment
Objectives/Evaluation
Rationale: This course needs to be changed to be properly aligned with the new Cisco Networking Academy official curriculum
Proposed Start Semester: Fall 2018
Course Description: In this course, students discuss 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 will learn to configure various WAN protocols, such as HDLC, Point-to-Point Protocol, PPoE, and GRE tunnels. This course is part of the CISCO networking curriculum at WCC and helps students prepare for a portion of the CISCO Certified Network Associate (CCNA) certification examination. This course was previously CNT 245. The title of this course was previously Internetworking IV-WANs.

Course Credit Hours

Variable hours: No
Credits: 4
Lecture Hours: Instructor: 60 **Student:** 60
Lab: Instructor: 0 **Student:** 0
Clinical: Instructor: 0 **Student:** 0

Total Contact Hours: Instructor: 60 **Student:** 60
Repeatable for Credit: NO
Grading Methods: Letter Grades
Audit
Are lectures, labs, or clinicals offered as separate sections?: NO (same sections)

College-Level Reading and Writing

College-level Reading & Writing

College-Level Math

No Level Required

Requisites

Prerequisite

CNT 226 minimum grade "C-"; may enroll concurrently

General Education

Degree Attributes

High School articulation approved

General Education Area 7 - Computer and Information Literacy

Assoc in Arts - Comp Lit
Assoc in Applied Sci - Comp Lit
Assoc in Science - Comp Lit

Request Course Transfer

Proposed For:

Eastern Michigan University

Student Learning Outcomes

1. Configure and troubleshoot network devices.

Assessment 1

Assessment Tool: A departmental skills-based final exam with a task list will be used to assess proficiency in applying the concepts and in performing hands-on tasks.
Assessment Date: Winter 2018
Assessment Cycle: Every Three Years
Course section(s)/other population: All
Number students to be assessed: All
How the assessment will be scored: Answer key or departmentally-developed rubric
Standard of success to be used for this assessment: 70% of the students will score 70% or higher
Who will score and analyze the data: Departmental faculty

2. Implement Access Control Lists (ACLs) to filter traffic.

Assessment 1

Assessment Tool: A Cisco Systems-prepared and graded multiple-choice final exam will be used to assess proficiency with these concepts.
Assessment Date: Winter 2018
Assessment Cycle: Every Three Years
Course section(s)/other population: All
Number students to be assessed: All
How the assessment will be scored: Answer key and departmentally-developed rubric
Standard of success to be used for this assessment: 70% of the students will score 70% or higher
Who will score and analyze the data: Departmental faculty

3. Design and build a small multi-site network.

Assessment 1

Assessment Tool: A departmental skills-based final exam, with a task list will be used to assess proficiency in applying the concepts and in performing hands-on tasks.
Assessment Date: Winter 2018
Assessment Cycle: Every Three Years
Course section(s)/other population: All

Number students to be assessed: All
How the assessment will be scored: Answer key and departmentally-developed rubric
Standard of success to be used for this assessment: 70% of the students will score 70% or higher
Who will score and analyze the data: Departmental faculty

4. Implement remote access and site-to-site virtual private networks (VPNs).
   Assessment 1
   Assessment Tool: A departmental skills-based final exam, with a task list will be used to assess proficiency in applying the concepts and in performing hands-on tasks.
   Assessment Date: Winter 2018
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All
   Number students to be assessed: All
   How the assessment will be scored: Answer key and departmentally-developed rubric
   Standard of success to be used for this assessment: 70% of the students will score 70% or higher
   Who will score and analyze the data: Departmental faculty

Course Objectives

1. Select WAN access technologies to satisfy business requirements.
2. Configure HDLC on a WAN link.
3. Configure Point-to-Point Protocol on a WAN link.
4. Configure a Cisco router with Point-to-Point Protocol over Ethernet (PPPoE).
5. Implement a GRE tunnel.
6. Implement eBGP in a single-homed remote access network.
7. Configure Simple Network Management Protocol (SNMP) to monitor network operations in a small to medium-sized business network.
8. Troubleshoot a network problem using Switch Port Analyzer (SPAN).
9. Use a systematic approach to troubleshoot end-to-end connectivity in a small to medium-sized business network.
10. Configure IPv4 and IPv6 ACLs.
11. Troubleshoot IPv4 and IPv6 ACLs.
12. Identify the WAN technologies and network services required by converged applications in a complex network.
13. Recognize the selection criteria of network devices and WAN technologies to meet network requirements.

New Resources for Course

Course Textbooks/Resources

Textbooks
Manuals
Periodicals
Software

Equipment/Facilities

Level III classroom

Reviewer	Action	Date
Faculty Preparer:		
John Trame	*Faculty Preparer*	*Oct 27, 2017*

Department Chair/Area Director:		
Philip Geyer	*Recommend Approval*	*Oct 30, 2017*
Dean:		
Eva Samulski	*Recommend Approval*	*Oct 31, 2017*
Curriculum Committee Chair:		
David Wooten	*Recommend Approval*	*Feb 26, 2018*
Assessment Committee Chair:		
Michelle Garey	*Recommend Approval*	*Feb 27, 2018*
Vice President for Instruction:		
Kimberly Hurns	*Approve*	*Feb 28, 2018*