

PROGRAM ASSESSMENT PLANNING FORM

Program to be assessed:

Title: Computer Networking Academy I (CVCNA1)

Division: BCT

Department: CIS/CNT

Program Code: 14300

Type of Award:  A.A.  A.S.  A.A.S.  
 Cert.  Adv. Cert.  Post-Assoc. Cert.  Cert. of Completion

Assessment plan:

Learning outcomes to be assessed	Assessment tool	When assessment will take place	Describe population to be assessed	Number of students to be assessed
Identify the architecture, structure, functions, components, and models of the Internet and computer networks including basic principles of IP addressing, IP addressing schemes, fundamentals of Ethernet concepts, with physical media and frame architecture	CNT 236 Cisco final exam	Once Every Three Years starting in the Fall of 2020	Students who have completed all four of the required courses associated with this Program – CNT206, CNT216, CNT226, and CNT236	All Students
Distinguish the architecture, components, and operations of routers and switches in small networks including configuration, basic functionality, and troubleshooting plus the identification of various Routing Protocols including RIPv1, RIPv2, single-area/multi-area OSPF, virtual LANs, and IPv4/IPv6 inter-VLAN routing	CNT 236 Cisco final exam	Once Every Three Years starting in the Fall of 2020	Students who have completed all four of the required courses associated with this Program – CNT206, CNT216, CNT226, and CNT236	All Students
Identify the architecture, components, and operations of routers and switches in large and complex networks including configuration for advanced functionality, troubleshooting to resolve common issues with OSPF, EIGRP, STP, and VTP in both IPv4 and IPv6 networks, plus implementation of DHCP and DNS operations in a network.	CNT 236 Cisco final exam	Once Every Three Years starting in the Fall of 2020	Students who have completed all four of the required courses associated with this Program – CNT206, CNT216, CNT226, and CNT236	All Students

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<p>Identify and distinguish various WAN technologies and network services required by converged applications in a complex network including the selection criteria of network devices to meet network requirements, configuration and troubleshooting techniques, resolution of common issues with Data Link protocols and implementation of IPSec and Virtual Private Network (VPN) operations in complex networks</p>	<p>CNT 236 Cisco final exam</p>	<p>Once Every Three Years starting in the Fall of 2020</p>	<p>Students who have completed all four of the required courses associated with this Program – CNT206, CNT216, CNT226, and CNT236</p>	<p>All Students</p>
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**Scoring and analysis of assessment:**

1. Indicate how the above assessment(s) will be scored and evaluated (e.g. departmentally developed rubric, external evaluation, other). Attach the rubric/scoring guide.

The final exam at the end of the final course, CNT236, which is provided by Cisco and taken on-line, will provide the basis for the evaluation. Being supplied and administrated by Cisco, this exam is used by all instructors teaching the Cisco discipline. Successful completion of this exam will reflect success for the whole program, as the Outcomes and Objectives for the final course are based on a foundation of information from the first three courses as well. The rubric used for the evaluation of the results is shown below:

Average of all students taking the test should equal or exceed 70% correct answers for all question used in the assessment test.

70% or greater of the number of students taking the assessment test should equal or exceed that 70% mark for all the question sued in the assessment test.

Outcome success will be based on the average of all student scores for each particular Outcome’s part of the test equaling or exceeding 70%.

2. Indicate the standard of success to be used for this assessment.

The standard of success will be based on meeting the 70% goals listed above – Overall Student average for the test equaling 70%, 70% of the students getting 70% or above, and each outcome having a 70% success rate as well.

3. Indicate who will score and analyze the data (data must be blind-scored).

All departmental instructors who teach sections of these courses.


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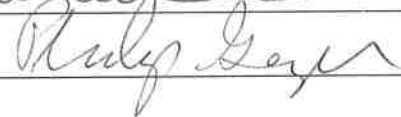
4. Explain how and when the assessment results will be used for program improvements.

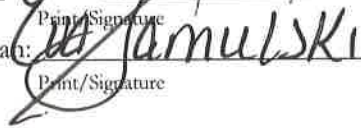
For each outcome/objective not being met, the following will take place:

- a. Review of the Cisco lecture notes and lab projects to be sure concept is explained properly
- b. Local revision of Cisco lecture and labs with changes/additions put in where needed.

Submitted by:

Name: William R. Reichert  Date: 10/23/2017

Dept Chair: Philip Geyer  Date: 10/26/2017

Dean: Jamulski  Date: 11-2-17

Please return completed form to the Office of Curriculum & Assessment, SC 257.

*Reviewed by Assessment Committee 11/30/17*

**PROGRAM ASSESSMENT PLANNING FORM**

**Program to be assessed:**

Title: Computer Networking Technology  
 Division: BCT Department: ELED Code: CVCNA1

Type of Award:  A.A.  A.S.  A.A.S.  
 Cert.  Adv. Cert.  Post-Assoc. Cert.  Cert. of Completion

**Assessment plan:**

Learning outcomes to be assessed	Assessment tool	When assessment will take place	Describe population to be assessed	Number of students to be assessed
1. Connecting multiple computers switches and routers, to simulate a corporate network connected to a service provider.	Skills-Based exam in the capstone course CNT 236.	Every three years <i>W, 2008 (year 2011)</i>	All students who completed the program within the past three years	Approximately 36 -54 students.
2. Configure the switches with basic configurations.	Skills-Based exam in the capstone course CNT 236.	Every three years	All students who completed the program within the past three years	Approximately 36 -54 students.
3. Configure the routers with basic configurations including IP addresses (in a VLSM hierarchical scheme), a routing protocol (either EIGRP or OSPF), and static routes where stipulated.	Skills-Based exam in the capstone course CNT 236.	Every three years	All students who completed the program within the past three years	Approximately 36 -54 students.
4. Configure the host computers to communicate on the appropriate LANs.	Skills-Based exam in the capstone course CNT 236.	Every three years	All students who completed the program within the past three years	Approximately 36 -54 students.
5. Verify connectivity.	Skills-Based exam in the capstone course CNT 236.	Every three years	All students who completed the program within the past three years	Approximately 36 -54 students.
6. Configure Frame Relay	Skills-Based exam in the capstone course CNT 236.	Every three years	All students who completed the program within the past three years	Approximately 36 -54 students.
7. Configure PPP with PAP and/or CHAP authentication	Skills-Based exam in the capstone course CNT 236.	Every three years	All students who completed the program within the past three years	Approximately 36 -54 students.

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8. Configure NAT	Skills-Based exam in the capstone course CNT 236.	Every three years	All students who completed the program within the past three years	Approximately 36 -54 students.
9. Configure DHCP	Skills-Based exam in the capstone course CNT 236.	Every three years	All students who completed the program within the past three years	Approximately 36 -54 students.
10. Configure VLANs on the switches.	Skills-Based exam in the capstone course CNT 236.	Every three years	All students who completed the program within the past three years	Approximately 36 -54 students.
11. Configure VLAN trunking, where necessary, to allow specific VLAN traffic to flow.	Skills-Based exam in the capstone course CNT 236.	Every three years	All students who completed the program within the past three years	Approximately 36 -54 students.
12. Configure the appropriate routers to route VLAN traffic.	Skills-Based exam in the capstone course CNT 236.	Every three years	All students who completed the program within the past three years	Approximately 36 -54 students.
13. Create and apply Access Control Lists (ACLs) to restrict traffic flow as specified.	Skills-Based exam in the capstone course CNT 236.	Every three years	All students who completed the program within the past three years	Approximately 36 -54 students.

**Scoring and analysis of assessment:**

1. Indicate how the above assessment(s) will be scored and evaluated (e.g. departmentally developed rubric, external evaluation, other). Attach the rubric/scoring guide.

*Portions of the Skills-Based Assessment are developed by Cisco Systems, to assess student outcomes for the capstone course (CNT 236) itself, but not the entire program. The department is adding portions to ensure that the assessment tool evaluates the student outcomes of the entire program. We will use a departmentally developed rubric to score and evaluate assessment tool.*

2. Indicate the standard of success to be used for this assessment.

*Each of the 13 program outcomes will be evaluated separately, with an expectation that 80% of the graduating students will have successfully achieved the given outcome with a score of 75% or better.*

3. Indicate who will score and analyze the data (data must be blind-scored).

*Electronics faculty who are not part of the CVCNT program will score and analyze the data.*

4. Explain the process for using assessment data to improve the program.

The CVCNT faculty will analyze the results of the assessment data for areas of weaknesses and strengths. Ideas will be generated to address the areas of weaknesses to improve the program.

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WASHTENAW COMMUNITY COLLEGE

**Submitted by:**

Name: John Trame *John Trame* Date: 12-14-06  
Print/Signature  
Dept. Chair: Gary Downen *Gary Downen* Date: 12/18/06  
Print/Signature  
Dean: Rosemary Wilson *Rosemary Wilson* Date: 1/5/07  
Print/Signature

*Please return completed form to the Office of Curriculum & Assessment, SC 247.*