

Computer Network  
Systems (Cisco  
Networking  
Academy)

MAGYC Department  
[Math/MFTN,  
Aviation,  
Geology/Geography,  
Physics and  
CSST/CISCO]

UC Clermont College

2015/2016

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## **I. Program Overview**

Approved by the Ohio Board of Regents in 2003, the Computer Network Support Technology program at UC Clermont College is a two-year career oriented program within the MAGYC Department [Math/Manufacturing Engineering Technology, Aviation, Geology/Geography, Physics, and Computer Systems Support Technology/Computer Network Systems Technology.] Successful graduates earn an Associate of Applied Science degree and acquire the skills and knowledge to test for industry standard certifications.

Computer network systems involves the design, installation and support of an organization's local-area network (LAN) and wide-area network (WAN) daily operations, as well as their Internet and intranet connectivity.

People who work in network systems support maintain network hardware and software, analyze problems and monitor the network to ensure its availability to system users. Network support personnel also gather data to identify customer needs and then use the information to identify, interpret and evaluate system and network requirements. Network administrators also may plan, coordinate and implement network security measures.

Computer network systems coursework, in combination with the well-balanced selection of General Education courses in English, math, personal communications, history, social sciences and others, provides students the skills necessary to operate effectively in the workplace and in customer environments. Students may test to acquire CCNA (CISCO Certified Network Associate), CCNP (CISCO Certified Network Professional), and CCNA Security certifications.

The Computer System Support Technology program creates a challenging learning environment by encouraging high expectations of learners through innovative techniques using technology. The program allows for individual differences through appropriate instruction allowing students to learn subject matter to become productive participants of the technology field.

We engage students with challenging academics and unique resources for them to become active members of the computer system support community.

## **II. Program Outcomes**

### **Intentional learning Outcome I:**

Students in the Computer Networking Systems Technology Program will install and document scalable routed networks using appropriate topologies, devices and technologies.

### **Intentional Learning Outcome II:**

Students in the Computer Networking Systems Technology Program will provide comprehensive troubleshooting services for network devices and TCP/IP (OSI) layers.

### **Intentional Learning Outcome III:**

Students in the Computer Networking Systems Technology Program will implement and administer measures and procedures to improve network performance and security.

### **Intentional Learning Outcome IV:**

Students in the Computer Networking Systems Program will apply critical thinking, decision making, and problem solving in a work environment.





#### IV. Methods and Measures

<b>Program's Intentional Learning Outcome #1 (Revised)</b>	<b>Where Assessed</b>	<b>Who Assessed</b>	<b>How Assessed</b>	<b>Results/Benchmark</b>
<p>Students in the Computer Networking Systems Technology Program will install and document scalable routed networks using appropriate topologies, devices and technologies.</p>	<p>End of "semester" comprehensive written objective test and skills assessment test (See note on page 11):</p> <ul style="list-style-type: none"> <li>• CSST1022C (CCNA 1)</li> <li>• CSST2022C (CCNP 1)</li> </ul>	<p>Following are the assessment functions:</p> <ul style="list-style-type: none"> <li>• Standard Cisco provided evaluative materials will be used</li> <li>• Assigned course instructor will administer tests</li> <li>• Program coordinator will analyze data and develop/implement plan for appropriate corrective action</li> </ul>	<p>The rubric for the written test will evaluate responses to questions covering the following major categories:</p> <ul style="list-style-type: none"> <li>• Network design</li> <li>• Component selection</li> <li>• Technology utilization</li> </ul> <p>The skills assessment test will be a scenario based evaluative instrument and the rubric will measure the ability to perform each of the following major tasks:</p> <ul style="list-style-type: none"> <li>• Plan development</li> <li>• Components and cabling</li> <li>• System performance</li> <li>• Documenting work</li> </ul>	<p>Eighty percent (80%) of students should be able to achieve a minimum of seventy-five percent (75%) score on each of the tests.</p> <p>Once CSST1022C is completed, students will have received sufficient training to test for the industry certification of Cisco Certified Network Associate.</p>

<b>Program's Intentional Learning Outcome #2 (Revised)</b>	<b>Where Assessed</b>	<b>Who Assessed</b>	<b>How Assessed</b>	<b>Results/Benchmark</b>
<p>Students in the Computer Networking Systems Technology Program provide comprehensive troubleshooting services for network devices and TCP/IP (OSI) layers.</p>	<p>End of "semester" comprehensive written objective test and skills assessment test (See note on page 11):</p> <ul style="list-style-type: none"> <li>• CSST1021C (CCNA 1)</li> <li>• CSST1022C (CCNA 2)</li> <li>• CSST2021C (CCNA Security)</li> <li>• CSST2022C (CCNP 1)</li> <li>• CSST2023C (CCNP 2)</li> <li>• CSST2024C (CCNP 3)</li> </ul>	<p>Following are the assessment functions:</p> <ul style="list-style-type: none"> <li>• Standard Cisco provided evaluative materials will be used</li> <li>• Seminar course will rely on coordination of student supervisor with instructor as well as assigned case studies and other real-life scenarios.</li> <li>• Assigned course instructor will administer tests</li> <li>• Program coordinator will analyze data and develop/implement plan for appropriate corrective action</li> </ul>	<p>The rubric for the written test will evaluate responses to questions covering the following major categories:</p> <ul style="list-style-type: none"> <li>• Testing methodology</li> <li>• Component operation</li> <li>• Analysis of symptoms</li> <li>• Performance issues</li> </ul> <p>The skills assessment test will be a scenario based evaluative instrument and the rubric will measure the ability to perform each of the following major tasks:</p> <ul style="list-style-type: none"> <li>• Fault isolation</li> <li>• User interface</li> <li>• Minimize down time</li> <li>• Documenting work</li> </ul>	<p>Eighty percent (80%) of students should be able to achieve a minimum of seventy-five percent (75%) score on each of the tests.</p> <p>Once CSST2021C is completed. Students will have received sufficient training to possibly secure the industry certification of Cisco Certified Network Associate – Security.</p> <p>Once CSST1024C is completed, Students will have received sufficient training to test for the industry certification of Cisco Certified Network Professional.</p>

<b>Program's Intentional Learning Outcome #3 (Revised)</b>	<b>Where Assessed</b>	<b>Who Assessed</b>	<b>How Assessed</b>	<b>Results/Benchmark</b>
<p>Students in the Computer Networking Systems Technology Program will implement and administer measures and procedures to improve network performance and security.</p>	<p>End of "semester" comprehensive written objective test and skills assessment test (See note on page 11):</p> <ul style="list-style-type: none"> <li>• CSST2021C (Cisco Security)</li> <li>• CSST2022C (CCNP 1)</li> <li>• CSST2023C (CCNP 2)</li> </ul>	<p>Following are the assessment functions:</p> <ul style="list-style-type: none"> <li>• Standard Cisco provided evaluative materials will be used</li> <li>• Assigned course instructor will administer tests</li> <li>• Program coordinator will analyze data and develop/implement plan for appropriate corrective action</li> </ul>	<p>The rubric for the written test will evaluate responses to questions covering the following major categories:</p> <ul style="list-style-type: none"> <li>• Testing methodology</li> <li>• Component operation</li> <li>• Analysis of symptoms</li> <li>• Performance issues</li> </ul> <p>The skills assessment test will be a scenario based evaluative instrument and the rubric will measure the ability to perform each of the following major tasks:</p> <ul style="list-style-type: none"> <li>• Fault isolation</li> <li>• User interface</li> <li>• Minimize down time</li> <li>• Documenting work</li> </ul>	<p>Eighty percent (80%) of students should be able to achieve a minimum of seventy-five percent (75%) score on each of the tests.</p> <p>Once CSST2021C is completed. Students will have received sufficient training to test for the industry certification of Cisco Certified Network Associate – Security.</p>



<b>Program's Intentional Learning Outcome #4 (Revised)</b>	<b>Where Assessed</b>	<b>Who Assessed</b>	<b>How Assessed</b>	<b>Results/Benchmark</b>
<p>Students in the Computer Networking Systems Technology Program will apply critical thinking, decision making, and problem solving in a work environment.</p>	<p>End of semester comprehensive written objective test and skills assessment test (See note on page 11):</p> <ul style="list-style-type: none"> <li>CSST2024C (CCNP 3)</li> </ul>	<p>Following are the assessment functions:</p> <ul style="list-style-type: none"> <li>Standard Cisco provided evaluative materials will be used</li> <li>Assigned course instructor will administer tests</li> <li>Seminar course will rely on coordination of student supervisor with instructor as well as assigned case studies and other real-life scenarios.</li> <li>Program coordinator will analyze data and develop/implement plan for appropriate corrective action</li> </ul>	<p>The rubric for the written test will evaluate responses to questions covering the following major categories:</p> <ul style="list-style-type: none"> <li>Testing methodology</li> <li>Component operation</li> <li>Analysis of symptoms</li> <li>Performance issues</li> </ul> <p>The skills assessment test will be a scenario based evaluative instrument and the rubric will measure the ability to perform each of the following major tasks:</p> <ul style="list-style-type: none"> <li>Fault isolation</li> <li>User interface</li> <li>Minimize down time</li> <li>Documenting work</li> </ul>	<p>Eighty percent (80%) of students should be able to achieve a minimum of seventy-five percent (75%) score on each of the tests.</p> <p>Once CSST2024C is completed. Students will have received sufficient training to test for the industry certification of Cisco Certified Network Professional.</p>

#### ***IV. Assessment Infrastructure***

Standardized written and skills assessment tests provided by Cisco will be used in all Academy courses. These tests are Cisco proprietary and cannot be reproduced or distributed in any manner. Points assigned to each question by Cisco will be used and applicable scores will be converted to percentages for inclusion in the Clermont program assessment process. Assigned course instructor will administer tests. The program coordinator will analyze data and develop/implement a plan for appropriate corrective action.

## **V. Findings**

N/A

## **VI. Use of Findings**

Assessment reports are finalized by June 1<sup>st</sup> and reviewed by program faculty. Program faculty meet during the summer to discuss results, identify issues, and review pedagogy. If warranted, pedagogical changes are made for program improvement.

In addition, assessment reports will be shared with the program advisory committee for comments and feedback. Any suggestions of curricular changes will be discussed and evaluated annually at the program advisory committee meeting before the suggestions are taken to the department level for approval.