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**Occupational Endorsement Certificate in Cisco Certified Network Associate (CCNA)**

**Academic Assessment Plan**

**Adopted by**

**The Computer Systems & Network Technology faculty: March 15, 2022**

Reviewed with curriculum changes by the Academic Assessment Committee: 4/15/22

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# Mission Statement

The Computer Systems & Network Technology (CSNT) program provides entry level skills and ongoing career education to meet the demand for well-trained technicians in computer systems and network operations.

# Student Learning Outcomes

Students graduating with an OEC in Cisco Certified Network Associate (CCNA) will be able to:

* Show knowledge of network infrastructure.
* Demonstrate competence in entry-level tasks of design, configuration, operation and troubleshooting Ethernet and TCP/IP networks.
* Demonstrate competence in the configuration and troubleshooting of Cisco routers and switches.

# Assessment Measures

# Table 1: Association of Assessment Measures to Student Learning Outcomes

| **Outcomes** | Final Exams | Practical Exams | CCNA\* | Frequency Assessed |
| --- | --- | --- | --- | --- |
| Show knowledge of network infrastructure. | 1 | 1 | 1 | Yearly |
| Demonstrate competence in entry-level tasks of design, configuration, operation and troubleshooting Ethernet and TCP/IP networks. | 1 | 1 | 0 | Yearly |
| Demonstrate competence in the configuration and troubleshooting of Cisco routers and switches. | 1 | 1 | 1 | Yearly |

0 = Measure is not used to measure the associated outcome.

1 = Measure is used to measure the associated outcome.

Each cohort of students will be assessed in at least CCNA 1 and CCNA 3, although they can be assessed in all three courses if desired. This allows for measuring of improvement by a particular cohort as well as comparison of different cohorts.

# Table 2: Assessment Measures and Administration

| **Measure** | **Description** | **Frequency/ Start Date** | **Collection Method** | **Administered by** |
| --- | --- | --- | --- | --- |
| **Final Exams** | Course Finals | As Scheduled | Instructor tabulates scores | Course instructor |
| **Practical****Exams** | Course Practical Exams | As Scheduled | Instructor tabulates scores | Course instructor |
| **CCNA\*** | CCNA Industry Certification Test | As available | Testing units  | Testing Units  |

\* The CSNT program is using industry certification tests as additional assessment measures when available because; a) they measure our students against an industry standard, b) they identify the strength of the student is the core components of the test, and c) for those who pass it allows them to enter the industry with an industry certification in addition to the CSNT AAS degree.

The CCNA certification cannot be reliably gathered and is not expected to be used as part of normal assessment. The CCNA certification is included so that it can be used as an outside standard to compare regular assessment data with if it can be gathered on a particular cohort.

Final Exams

Measure Description:

The final exams allow the students to demonstrate knowledge relating to the objectives of the course.

Factors that affect the collected data:

Limited time may reduce the overall scope of the exam.

How to interpret the data:

Each course will provide a list of requirements for the final exam, and a point scale for each area. The instructor will then tabulate the total points to provide a final score.

The following final exams will be used to assess the outcomes of the program.

* CNT A170 CCNA 1
* CNT A261 CCNA 2
* CNT A270 CCNA 3

Practical Exams

Measure Description:

The practical exams allow the students demonstrate the skills being presented in the course.

Factors that affect the collected data:

Limited time and equipment availability may reduce the overall scope of the exam.

How to interpret the data:

Each course will provide a list of requirements for the practical exam, and a point scale for each area. The instructor will then tabulate the total points to provide a final score.

The following practical finals will be used to assess the outcomes of the program.

* CNT A170 CCNA 1
* CNT A261 CCNA 2
* CNT A270 CCNA 3

CCNA

Measure Description:

The Cisco Certified Network Associate (CCNA) certification is a worldwide industry benchmark in entry level capabilities in networking.

Factors that affect the collected data:

Testing for the CCNA certification is voluntary on the student’s part as is the reporting of the results of test. The CCNA cannot be reliably gathered and is not expected to be used as part of normal assessment. The CCNA is included so that it can be used as an outside standard to compare regular assessment data with if it can be gathered on a particular cohort.

How to interpret the data:

The CCNA certification provides an external objective validation of the learning outcomes.

The CCNA certification (Cisco Certified Network Associate) tests an examinee’s knowledge and skills related to network fundamentals, LAN switching technologies, IPv4 and IPv6 routing technologies, WAN technologies, infrastructure services, infrastructure security, and infrastructure management.

# Assessment Process

The program assessment coordinator (faculty service assignment) will inform all faculty teaching courses that incorporate assessment measures of the requirement to submit data as appropriate to the measure. The data will be collected at the end of the fall and spring semesters. The data will be collated and analyzed after the spring semester and before the next fall semester.

The program faculty members are responsible for the content of and the implementation of the specific course case studies and final exams.

Faculty will work with the students to setup, log and keep track of the students taking certification exams and their pass rates.

Program faculty will meet at least once a year to review the data collected using the assessment measures. This meeting could result in recommendations for program changes that are designed to enhance performance relative to the program’s outcomes. The results of the data collection, an interpretation of the results, and the recommended programmatic changes will be submitted to the Office of Academic Affairs (in the required format) each year.

The faculty, after reviewing the collected data and the processes used to collect it, may decide to alter the Assessment Plan. Changes may be made to any component of the plan, including the outcomes, assessment measures, or any other aspect of the plan. The changes will be approved by the faculty of the program. The modified assessment plan will be forwarded to the dean’s office and the Office of Academic Affairs.