

## Course Outcomes Guide

**Course Title: IST 255 CCNA3: Advanced Routers**

**Course Instructor(s): Jack Drooger**

**Programs: Network Administration, Cyber Security**

### Expected Learning Outcomes

- Think critically
- Communicate effectively with both verbal and written forms
- Perform and share cooperatively in team projects
- Review and practice computer and network etiquette and ethics found in working environments
- Administer and troubleshoot a network infrastructure
- Evaluate best practices in security concepts to maintain confidentiality, integrity and availability of computer systems

**Assessment** (How do students demonstrate achievement of these outcomes?)

Satisfactory scores on exams and projects.

Satisfactory scores on exams modeled after industry standard certification exams. Models are developed from the following certification exams: Cisco Academy CCNA.

Completion of hands-on lab assignments created by Cisco Academy using Cisco routers and switches.

**Validation** (What methods are used to validate your assessment?)

1. Approval of Information Systems Technology Advisory Council
2. Tests comparable to Industry Standard Certification Exams.
3. Faculty Review
4. Cisco Academy assessment

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### **Results** (What do the data show?)

IST 255 has only been taught in the first 7.5 weeks of the Spring Semester. This is due to the difficulty in obtaining qualified instructors because of the strict requirements the Cisco Academy places on them.

Since the 2012 spring semester a total of 52 students have taken IST255 Network III.

51 (98%) of the students completed the course and 50 (96%) were successful.

The grade distribution is as follows:

|   |    |     |
|---|----|-----|
| A | 26 | 50% |
| B | 16 | 31% |
| C | 8  | 15% |
| D | 1  | 2%  |
| F | 1  | 2%  |

There was 0 audit and 0 withdrew from the course

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### **Follow-up** (How have you used the data to improve student learning?)

96% of students completing course requirements successfully complete coursework

Curriculum is frequently updated to map to current objectives of the Cisco Certificated Network Associate certification.

The Cisco classes have been moved to the new STEM building and have been an integral part of the networking and security curriculum.

New equipment (routers and switches) has recently been purchased.

(To do)

Continue to update Cisco curriculum and Cisco hardware

On the national level all the curriculums everywhere are being required to reduce the total number of credits.

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The Cisco courses are four credits each and take a significant portion of the curriculum. In an effort to reduce the total number of credits it is being considered to develop two new courses that are three credits each to cover the three current “Cisco” courses.

The Advisory group is divided on this issue.

### **Budget Justification**

(What resources are necessary to improve student learning?)

PC lab hardware; projection unit, cabling, tools, printers, PCs, servers

Cisco routers and switchers.

Course Management software

Classroom Management system software