Course Title: IST 154 Networking Basics

Course Instructor(s): Steve Shank

Programs: Network Administration, Cyber Security, Forensics

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?)
• *Chapter Quizzes* - students successfully complete quiz questions from textbook publisher

• *Transcender Net+Sim* – students achieve successful score on a standardized network exam

• *Labs.* With a partner complete activities that require analysis and application of current network practices

• *Midterm/Final*

• *Individual Research Paper.* Students will complete a research project on a topic of the student's choice that will culminate in a paper. Milestones are laid out in the schedule below for outline and final version. The topic must be relative to the course and approved by the instructor. Students are expected to write at the college level – work must demonstrate a conspicuous absence of grammar, spelling, and logic errors, be professional in tone and language, and have good flow. Students are strongly encouraged to follow the Publication Manual of the American Psychological Association for format and style.

• *Presentation*. Students will present a topic of their choice. The instructor must approve the topic. The presentation must be between 3 and 5 minutes and can be in any format chosen by

the student and may make use of slides, whiteboard, handouts, and Web links. Slides, exhibits, etc, are not required. First come first served.

• *Class Discussion*

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

1. Approval of Information Systems Technology Advisory Council

2. Tests comparable to Industry Standard Certification Exam.

3. Faculty Review

Results (What do the data show?)
Since the 2010 summer semester a total of 230 students have taken IST154 Network Fundamentals.

183 (80%) of the students completed the course and 179 (78%) were successful.

The grade distribution is as follows:

A	115	50%
B	43	19%
C	21	9%
D	4	2%
F	30	13%

There was 0 audit and 17 withdrew from the course.
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The following data is from common labs

	Self-Test*	HOP-2A (Making Cable)**	Hop-4A2 (Wireless Site Survey)***
Student #1	50%	100%	90%
Student #2	98%	100%	100%
Student #3	97%	100%	82%
Student #4	100%	100%	100%
Student #5	0%	100%	82%
Student #6	80%	100%	100%
Student #7	55%	100%	100%
Student #8	0%	100%	90%
Student #9	66%	100%	90%
Student #10	48%	100%	82%

Student #11	52%	100%	100%
Student #12	46%	100%	90%
Student #13	40%	100%	82%
Student #14	88%	100%	90%
Class Average	59%	100%	91%

Follow-up (How have you used the data to improve student learning?)
Student feedback from students in other program courses state IST 154 is helpful in their understanding and completing of later courses.

Advisory group advises to incorporate more practical concepts into the curriculum when possible.

Place a greater focus on completing simulated CompTIA Net+ exams.
Included the Transcender suite of exams for practice by students. These objectives are mapped to the CompTIA Net+ Exam. These exams will be taken at beginning of course and the end of the course thereby giving data regarding student progress.

The current text is in a newer new edition which has moved further away from industry standards. Also the hands-on components are problematic. Will make move to institute new textbook.

The textbook publisher and TEST OUT corporation dissolved their partnership. Since the TEST OUT project is not bundled it is more expensive and has been dropped from course. We will examine new resources that are being developed by the publisher.

Including a research paper and team projects improve student understanding.

Include assignments that utilize real and/or simulated network operating systems

(To do)
Evaluate new textbook and available resources. The company TEST OUT, through it's product LabSim, provides a varied learning modes to the student. The product also allows better tracking and evaluation of student progress.

Incorporate the newly acquired Netlabs product at HCC. Through the implementation of virtualization provide the students with a rich opportunity to work in a real world environment.

IST 154 is a course in several programs and if frequently taught. Many adjuncts are hired to teach this course. Work needs to be done to more closely follow a set standard for the course.

Budget Justification

Course Outcomes Guide
(What resources are necessary to improve student learning?)

PC lab hardware; switches, routers, projection unit, cabling, tools, printers, PCs, servers
Wireless hardware and software
Security hardware and software
Simulation software, Virtual PC licenses.
LabSim Software.
Course Management software
Classroom Management system software
Computer based Portfolio system