

Course Title: IST 154 Networking Basics

Course Leader: Karen Weil-Yates

Programs: IST Computer Support Services, IST Networking Track I, IST Networking Track II, Forensics, CYB Cybersecurity

Expected Learning Outcomes

- *Students will be able to demonstrate knowledge of network architecture through drawing and site assessment through written documentation*
- *Students will be able to install, configure, use and manage TCP/IP on both wired and wireless Peer-to-peer networks*
- *Students will be able to use critical thinking skills in troubleshoot problems in an existing network environment*
- *Students will be able to prepare for CompTIA's vendor-independent networking certification exam, Network+*

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

Students are required to

- Complete LabSim Chapters (online textbook with video lectures and interactive labs and quizzes)
- Complete LabSim Domain exams (5)
- Complete hands-on activities in-class, online worksheets and (interactive Virtual labs)
- Take Transcender certification preparation exam for Net+

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

This course's assessments are validated by the advisory committee members as needed. Course content is mapped to Net + Certification Exam objectives (additional objectives are also included). The course software include 6 exams taken throughout the semester (five are taken outside of class and may be taken multiple times until the due date. The 6th is taken in class and is timed. Students are also required to take a nationally approved certification preparation exam for Net+. They take the exam at least twice in the semester: The first time is to give the instructor an idea of the student's "starting point"—much like a pre-test. The second exam is the only other "written exam" that is given; grades for both the 2nd exam (Transcender) and the 6th textbook exam are compared. Students have the opportunity to take the Transcender exam multiple times—to achieve the best possible grade.

Results (What do the data show?)

The following averages show that students are doing well (walk-aways were removed). Three of the five assessments show passing or above average scores. The Visio Drawing assignment scores need to improve.

Course Outcomes Guide 2019

Year	Making Cable	Transcender 2	Visio Drawing-6A	Domains	TestOut Final
2019	88%	77%	66%	84%	49%
2018	85.1%	73.5%	59.6%	82.1%	No data collected

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

The Visio drawings are crucial for developing critical thinking skills. In several classes, I had teams that did not submit their assignments bringing down overall class averages. I have reworded the assignments for clarity and the scores have improved a little over 6% from the previous year. Domains scores have increased over the previous year as well.

I have relied upon Visio being provided to the students for free through the MSDNAA agreement; it appears that Visio while installed across campus will not be available to students for home use. I hesitated to include the TestOut Final as an assessment; however, we will be losing Transcender as a tool next year as the company's licensing agreement has changed to on-line and per student (there would be no control over testing conditions). TestOut's final exam is much more rigorous, but students are only permitted to take it once. I will need to find another assessment to include for next year; I am strongly considering the wireless site survey. This assessment is done as a team and includes several documents (report, memo, spreadsheet, drawings) and site survey tools which can be downloaded as cell phone apps.

Budget Justification

(What resources are necessary to improve student learning?)

- PC lab hardware: NICs, switches, routers, projection unit, cabling, tools, printers, PCs, servers
- Wireless hardware and software
- Security hardware and software
- Simulation software, Virtual PC licenses.
- Course Management software
- Classroom Management system software