

Course Title: IST 150: PC Tech/Troubleshooting and Repair

Course Leader: Karen Weil-Yates

Expected Learning Outcomes for Course

- *Students will be able to assemble, setup, and upgrade personal computer systems and mobiles devices including netbooks and tablets*
- *Students will be able to diagnose, isolate faulty components using critical thinking skills*
- *Students will demonstrate customer service, troubleshooting and preventative maintenance skills*
- *Students will be able to prepare for certification*

Assessment

(How do students demonstrate achievement of these outcomes?)

Students are required to

- complete hands-on labs and answer questions that promote Internet research of diagnostic solutions, setups, and upgrades; customer service and critical thinking.
- complete hands-on activities that include assembling a computer system, installing peripherals and expansion cards, monitoring systems using utility software, troubleshooting, replacing screens on mobile devices
- take hands-on exams: one, where they identify parts and their characteristics; or, where they diagnose and repair a faulty system
- take the Kaplan Self-Test Essentials Exam Prep for A+ (currently the leading prep exam for certification)

Validation

(What methods are used to validate your assessment?)

All instructors who teach this course must be A+ certified. The textbook is an approved CompTIA A+ text and is published by an industry leader in the information technology field.

- This course's assessments were validated at the by advisory committee members as needed. Course content is mapped to A+ 901 Certification Exam objectives (additional objectives are also included). Students are required to take a nationally approved certification preparation exam for A+. 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. Then, the student may take this exam as many times as they like throughout the semester, with the instructor recording the highest score. (Outcome #4)
- Get them used to the type of questions and the speed/pace at which they make take a true certification exam
- Get students into the habit of preparing for an exam—repetitions help with memory retention
- Get students to set goals and achieve those goals (I am going to get a ___% on this exam)

- Give students the initiative and encouragement to take the actual certification—the prep that is used sets a higher bar than the actual certification—this if students pass this prep that can pass the certification.

Results

(What does the data show?)

Transcender Exam (901) results are as follows for the year (3 sections), displayed as Averages:

Transcender 2 (meaning the second time the students take the exam) shows an average of **79%**. These assessments map to the fourth Outcome.

Hands-On Exams

Hands-On Identification exam: The average for the year was **86%** (previously it was 74%). Excellent results due to the timing of the exam (later in the semester and a Study Guide that students create /fill-in during lecture and a Review PowerPoint). This maps to the first outcome.

HOP 10B: Printer Maintenance

This HOP was added as a measurement of course outcomes—specifically the third outcome that includes customer service, preventative maintenance. This project requires students to contact their “client” via email using proper etiquette to set up an appointment for laser printer maintenance. HCC staff members have agreed previously to work with teams of students on this project and most agree to work with my students each semester. Staff members have evaluation sheets of the required tasks for the team, including introducing themselves, explaining their required tasks, cleaning up the site when done and asking if the staff member has any questions. Students have their own checklist that they must submit. The average score for this year was **89%**.

Follow-up

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

This will be the last year for Transcender to be used as an assessment tool; the company no longer offers a site/seat license. Only individual student licenses are available which means that students can take the prep exam at home which is great for them but loses its validation as an assessment score. I will have to determine another method for students to practice for their certifications.

The Printer Maintenance Project is a great assessment in that it incorporates customer service into the assessments (Outcome #3). The HCC staff that have agreed to help students with this project tell me that they like to interaction with our students knowing that they are assisting in some way with their courses. Prior to their meeting with their assigned staff person, we review email etiquette, personal appearance and professional courtesy skills. The scores tell me that students are doing well with this project and I will keep project.

I will continue with an on-line text, adopting a new one that reflects the new CompTIA certification that takes effect August 2019. I am changing publishers this year as there were some problems with the interface. I have created on-line worksheets that I call Ps&Qs (Podcasts & Questions) be done before we begin working on the chapter topic Hands-On Projects (HOPs)—

Course Outcomes Guide -2019

students are not permitted to work on HOPS until those were completed. These worksheets allow me to introduce some of the latest technology they may not be found in their text; it also allow me to introduce them to some of the “gurus of the ‘Net’”. (Outcomes #2 & #3)

Last year I re-evaluated/rewrote HOPs (Hands-On Projects) (where necessary) to increase critical thinking and troubleshooting skills; I will continue to do so this year. Too many that were adapted from the text were Yes/No/How Many types of questions; students were getting perfect scores without much effort on their HOPs. (Outcomes #2 & 3)

Budget Justification

(What resources are necessary to improve student learning?) 10-seat site license for A+ Transcender Certification software; 10 systems per class; safety equipment (anti-static mats and wrist straps); test equipment (multimeters, power supply testers, etc); peripherals; I/O devices; old laptops; demo equipment; sleeve of CDs; networking equipment (NICs, switches, cables); wireless adapters, netbooks, removable hard drives, tablets & replacement screens, soldering equipment, Apple Mac-minis, all-in-ones.