Course Title: IST 151: PC Tech/Operating Systems
Course Leader: Karen Weil-Yates

Expected Learning Outcomes for Course
- *Students will be able to install, configure and maintain the operating system in both single and dual boot configurations within the Windows family of operating systems.*
- *Students will be able to perform advanced file management operations in order to organize, maintain personal computer systems in a workplace or home environment*
- *Students will utilize system utilities to allocate and organize storage and manage peripheral devices*
- *Students will demonstrate customer service, troubleshooting and preventative maintenance skills using critical thinking skills*
- *Configure, navigate, and synchronize mobile devices, including netbooks and tablets*
- *Students will be able to prepare for certification*

Assessment (How do students demonstrate achievement of these outcomes?)
Students are required to
- complete hands-on activities and answer questions that promote Internet Research of diagnostic solutions, setups, and upgrades; customer service and critical thinking.
- Take a hands-on exam, where they are given a drive and must prepare it for deployment in another country (regional settings, sfc, sigverif, group policy, registry change, and setting password parameters)
- take the Kaplan Transcender 902 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+ 902 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. The second exam is the only other "written exam" that is given. The student may take this exam as many times as they like throughout the semester, with the instructor recoding the highest score. They have access to the answers in the form of taking the exams in a study mode or by borrowing printouts in a notebook to review the answers and rationale behind those answers (there are over 350 questions). The intentions behind this strategy are to:
- 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 (*902* results are as follows for the year (1 section), displayed as Averages

Trans 1 2017	Trans 1 2016	Inc/Dec	Trans 2 2017	Trans 2 2016	Inc/Dec
59%	53%	6%	67%	46%	21%

One student missed taking the second Transcender (if yu removed his zero—then the class average jumps to 76%); another got a lower score than the first attempt. This was a very motivated group for the most part.

Hands-On Exam Mobile devices HOPs:
The Hands-On Exam is scenario based; students are asked to prepare a prototype system that will be deployed to another country. They must perform 7 tasks using various utilities and commands that they have studied; they must also create a batch file to solve a specific problem.

2017 Hands-on Exam 1	2016 Hand-on Exam 1	Inc/Dec	2017 HOP 11A-J	2016 HOP 11A-J
80%	78%	2%	89%	Not used this year

This class showed a 2% increase; again, in general this was a highly motivated group.

HOP 11 A-J was included this year since it related to the changes/updates/new additions to CompTIA objectives of mobile devices, Apple and Linux OSs.

Follow-up (How have you used the data to improve student learning?)
Students will continue to take the Transcender: once at the beginning of the semester, as a pre-test/base rate and again at the end of the semester. For the second Transcender, students are permitted to take the exam in certification mode as many times as they like with the highest being recorded for their exam grade. Students are also encouraged to take the exam during the semester in Study Mode—showing the correct answers along with an explanation as the student progresses through the exam. I plan to require them to take the exam twice after their initial attempt in hopes of increasing scores. I think that initial scores for Transcender are higher because students have taken IST 150.

I will continue with the on-line text/UCertify; students liked the text and worked on their interactive assignment before coming to class.

Budget Justification (What resources are necessary to improve student learning?)
10-seat site license for A+ Self-Test Certification; Operating System Software, CDs/DVDs; MSDNAA Operating system software; 2 removes drives per student; sleeve of DVDs/CDs; 9 tablets (new/under warranty); 6-9 tablets (older for rooting—removing OEM software and adding new ROMs).