Program Outcomes Guide #3 (POG #3)

Program Title: Computer Support Specialist

Program Team: Karen Weil-Yates

Expected Learning Outcomes

- Implement critical thinking skills in navigating, installing & troubleshooting Windows-based operating systems and navigating & implementing Unix-based operating systems
- Demonstrate critical-thinking and problem-solving skills in building, repairing and upgrading microcomputer systems and associated peripherals
- Exhibit skills in customer service, both online and interactively through courtesy, dependability, timeliness, preparedness
- Demonstrate mastering of software applications through their use, installation & troubleshooting
- Demonstrate understanding of Help Desk organization and management using written & oral communication skills, mathematical skills, networking skills, administration

Assessment (How do students demonstrate achievement of this outcome?)

- Implement critical thinking skills in navigating, installing & troubleshooting Windows-based operating systems and navigating & implementing Unix-based operating systems
    - Demonstrate the ability to install system software properly
    - Demonstrate a systematic approach to troubleshooting a compromised system
    - Demonstrate the ability to navigate various operating systems and to utilize the proper system tools to solve analyze and solve problems and situations
    - Analyze a given scenario and determine the best/most efficient solution
- Demonstrate critical-thinking and problem-solving skills in building, repairing and upgrading microcomputer systems and associated peripherals
    - Demonstrate the ability to build a new tower-based system
    - Demonstrate the ability to select, install and use the correct replacement part
    - Demonstrate the ability to replacement components in a laptop
- Exhibit skills in customer service, both online and interactively through courtesy, dependability, timeliness, preparedness
    - Communicate clearly with customers in face-to-face, remotely and via the phone
    - Demonstrate and put into practice the 10 commandments of Computer Ethics
    - Demonstrate time management skills in repairing systems
    - Demonstrate professionalism
- Demonstrate mastering of software applications through their use, installation & troubleshooting
    - Demonstrate a broad knowledge-base of applications software and the ability to demonstrate and explain concepts to end-users both written and orally
    - Demonstrate troubleshooting ability to determine why an end-user cannot complete a specific task and be able to explain and demonstrate the correct solution

- o Demonstrate the ability to investigate new application software to suit the needs of a client; install, customize and update software as needed; and train end-users to the new product
- Demonstrate understanding of Help Desk organization and management using written & oral communication skills, mathematical skills, networking skills, administration
  - o Demonstrate understanding the role of the Help Desk within an organization
  - o Demonstrate the ability to

Assessment tools currently being used:
- Self-Test software (brand of certification preparation software) for A+ and Net+
- Case Studies with work-place scenarios to solve given problems
- Activity sheets to demonstrate/practice skills
- On-line Activity Sheets to promote Internet research
- Topical Presentations (research, develop, create/document)
- Exams: Hands-on, Quizzes (scenario/problem-solving-based), Out-comes based
- Hands-on computer repair clinic (real systems are brought in, logged, assessed and repair from the community)
- Detailed documentation, such as: Research papers, training manuals, deployment plans

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

- Advisory Committee and Faculty Review
- Self-test software is nationally recognized preparatory exam software for certification exams
- Internship supervisors

Results (What do the data show?)

Requiring the Self-Test in 3 of the classes and making the score a "final grade" is showing an improvement in students' scores (previously student took the Self-Test for a certain amount of points—just for taking it—now they have "vested" interest in taking the test).

Working in the Computer repair Clinic continues to be a success: we have increased the number of computers repaired per semester; students continue to improve their customer service troubleshooting and repair skills.

Reports from internship supervisors include good marks for customer service skills and technical skills. Several have commented that these students need more networking skills, specifically working with active Directory and adding users. I plan to add IST 261 Server Management as a required course.

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

I have updated Hands-on Exams to reflect more critical thinking skills; created rubrics for on-line forums; added samples of expected work outcomes to Moodle course content. I am adding my own podcasts to courses for brief explanations/demos in the areas where students seem to struggle the most.

Budget Justification
(What resources are necessary to improve student learning?)
Computers for repair classes; replacement parts; Operating systems (covered through the MSDNAA); Microsoft Office Suite; removable hard drives; Self-Test software; Networking equipment; CDs/DVDs.