CTS 155 Tech Support Functions

COURSE DESCRIPTION:
Prerequisites: None
Corequisites: None

This course introduces a variety of diagnostic and instructional tools that are used to evaluate the performance of technical support technologies. Emphasis is placed on technical support management techniques and support technologies. Upon completion, students should be able to determine the best technologies to support and solve actual technical support problems. The course includes hands-on labs and a team-based project to reinforce troubleshooting skills and enhance teamwork and collaboration. Topics also cover basic user/system setup and configuration.
Course Hours Per Week: Class, 2. Lab, 2. Semester Hours Credit, 3.

LEARNING OUTCOMES:
Upon completion of the course, the student will be able to:
1. Define the concept of helpdesk models and their significance in organizational support structures.
    a. Describe different types of helpdesk models, including traditional tiered, follow-the-sun, virtual, outsourced, hybrid, and specialized models.
    b. Explain the operational frameworks and characteristics of each helpdesk model.
    c. Evaluate the advantages and disadvantages of implementing various helpdesk models.
    d. Analyze real-world case studies and examples of organizations using different helpdesk models.
    e. Identify best practices for selecting, implementing, and managing helpdesk models.
    f. Discuss emerging trends and future directions in the field of helpdesk models.
    g. Demonstrate an understanding of how helpdesk models can be tailored to meet specific organizational needs and industry requirements.
2. Apply Fundamental Troubleshooting Strategies and Techniques
    a. Apply basic troubleshooting methodologies to diagnose and resolve common Windows operating system issues.
    b. Utilize diagnostic tools and utilities to identify hardware and software-related problems.
    c. Analyze error messages and log files to pinpoint the root cause of IT problems and implement appropriate solutions.
    d. Implement system restore and recovery procedures to revert system settings and recover data in the event of system failures.
    e. Employ various OS and third-party backup utilities to ensure data and registry retention.
3. Communicate and collaborate effectively in a helpdesk environment
    a. Articulate various helpdesk
    b. Develop effective communication skills for providing technical support to end-users with varying levels of technical expertise.
    c. Collaborate with team members in a helpdesk environment to share knowledge, expertise, and resources for efficient problem-solving.
    d. Participate in a team-based project to troubleshoot complex Windows issues and present solutions to the class
4. Employ Standard Configuration and Management Practices

a. Understand fundamental concepts of system setup and configuration within a Windows environment.
b. Perform basic user account management tasks, including user creation, deletion, and password resets.
c. Configure system settings and preferences to optimize performance and user experience.
d. Implement basic security measures to protect Windows systems from common threats and vulnerabilities.

OUTLINE OF INSTRUCTION:
I. Develop a Familiarity with Various Computer Hardware Devices
II. Apply Basic Troubleshooting Methodologies
    A. Utilize basic troubleshooting methodologies
    B. Apply of basic troubleshooting techniques to diagnose and resolve common Windows OS issues
    C. Employ diagnostic tools (e.g., Event Viewer, Task Manager) to determine issues
    D. Interpret error messages and log files
III. Implement System Restore, backup and Recovery Procedures
    A. Understand and implement system restore options
    B. Employ appropriate procedures for system failures and data recovery
    C. Utilize both of OS and third-party backup utilities for Data and Registry Retention
    D. Articulate the importance of data and registry retention for system maintenance
IV. Employ Communication Strategies for Providing Technical Support to End-Users
V. Implement Basic Security Measures

REQUIRED TEXTBOOK AND MATERIALS:
Text to be assigned by the instructor each semester.