

**STATE UNIVERSITY OF NEW YORK
COLLEGE OF TECHNOLOGY
CANTON, NEW YORK**

COURSE OUTLINE

ELEC 126 – DIGITAL SYSTEM FOR TELECOMMUNICATIONS II (Verizon)

**Prepared By: Art Hurlbut
Revised By: Stacia Dutton**

**CANINO SCHOOL OF ENGINEERING TECHNOLOGY
ELECTRICAL TECHNOLOGY
FEBRUARY 2012**

ELEC 126 – DIGITAL SYSTEM FOR TELECOMMUNICATIONS II

- A. TITLE: DIGITAL SYSTEM FOR TELECOMMUNICATIONS II**
- B. COURSE NUMBER: ELEC 126
SHORT TITLE: DIGITAL SYSTEMS II**
- C. CREDIT HOURS: 4**
- D. WRITING INTENSIVE COURSE (OPTIONAL): N/A**
- E. COURSE LENGTH: 15 WEEKS**
- F. SEMESTER(S) OFFERED: FALL**
- G. HOURS OF LECTURE, LABORATORY, RECITATION, TUTORIAL, ACTIVITY:
4 HOURS LECTURE PER WEEK**
- H. CATALOGUE DESCRIPTION: In this course students will be working with hardware and software installation with an introduction of the personal computer fundamentals. Students will connect a personal computer to a network, and install and setup a printer. The course will cover managing and supporting Windows. Configure user related issues and customization. Learning how to maintain a computer and troubleshooting fundamentals. An optional topic would cover Home Technology Integration including surveillance and home automation. The course is composed of lecture and in-class demonstration.**
- I. PRE-REQUISITES/CO-COURSES: ELEC 125 - Digital System for Telecommunications I**

J. GOALS (STUDENT LEARNING OUTCOMES):

By the end of this course, the student will:

<i>Course Objective</i>	<i>Institutional SLO</i>
a. Identify the advantages and disadvantages of the different Operating Systems	2. Crit. Thinking 3. Prof. Competence
b. Describe the installation of hardware components and install an Operating System	1. Communication 2. Crit. Thinking
c. Explain and use different troubleshooting tools and utility software	1. Communication 2. Crit. Thinking
d. Analyze the difference and similarities from personal computers to notebooks, tablets, PDAs and other Handheld Devices	2. Crit. Thinking
e. List the different types of printers and demonstrate how to setup a printer	1. Communication 2. Crit. Thinking
f. Demonstrate a basic understanding of networks	2. Crit. Thinking 3. Prof. Competence
g. Manage and support Windows security, registry, recovery methods	2. Crit. Thinking 3. Prof. Competence
h. Demonstrate how to customize the computer for each individual customer use	2. Crit. Thinking 3. Prof. Competence
i. Explain how to work with support services	1. Communication 2. Crit. Thinking

- K. TEXTS:** 1. A+ Guide to Managing and Maintaining Your PC Fifth Edition Enhanced, Comprehensive by Andrews, Course Technology
2. MCDST 70-272: Supporting Users and Troubleshooting Desktop Applications on a Microsoft Windows XP Operating System by Carswell, Course Technology

L. REFERENCES:

M. EQUIPMENT: Blackboard and the internet are to be used as an integral part of the course delivery process, Laptop computer, Scientific calculator, MultiSim, Microsoft Office

N. GRADING METHOD: (P/F, A-F, etc.) A-F

O. MEASUREMENT CRITERIA/METHODS:

1. Pre-testing, progress testing, and post-testing
2. Completion of Blackboard-posted assignments (HW, study, etc.)
3. Completion of hands-on lab work
4. Completion of a Project

P. DETAILED TOPICAL OUTLINE:

1. Installing and Using Windows XP Professional
 - a. Features and Architecture

- b. Installing
- c. Using
- d. Installing Hardware and Software

2. Choosing an Operating System

- Current and Legacy Operating Systems (DOS, Win9x, WinNT, Win2000, WinXP, Unix, Linux, MacOS)
- Advantages vs. Disadvantages

3. Managing and Supporting Windows

- Security
- Registry
- Troubleshooting the Boot Process
- Maintenance and Troubleshooting Tools
- Disaster Recovery

4. Introduction to Supporting Users

- Resolving User Problems
- Using Remote Assistant
- Relationships Within the IT Department
- Resolve Issues Related to Operating System Customization
- Customizing the Start Menu and Taskbar
- Customizing Accessibility Settings
- Customizing the Display Fonts

5. Configure User-Related Issues

- Configuring Access to Applications on Multi-user Computers
- Configuring the Operating System to Support Applications

6. Maintenance and Troubleshooting Fundamentals

- POST
- Error codes (audio and display)
- Scandisk
- System Defragmenter
- PM (cleaning)
- Backup and Restoring Registry
- Backup and Restoring Files
- RAID

7. Configuring and Troubleshooting Operating System Features

- Resolving Issues Related to Operating System Features
- Troubleshooting Tools
- System Restore

8. Utility Software

- Anti-virus
- Spyware & Adware
- Firewalls
- Security

9. Notebooks, Tablets, PDAs, and other Handheld Devices

10. Supporting Printers

- Types
 - Setup
 - Print sharing
11. Connecting PCs to Networks and the Internet (Brief Discussion)
- Types
 - Ethernet
 - Wireless
 - Home networking
 - Peer to Peer
 - Client-Server
12. Home Technology Integration (HTI+) **Optional**
- Audio
 - Video
 - Telephone
 - Cable
 - Home Automation
 - Surveillance

Q. PROJECT LIST:

- Installing and Using Windows XP Professional
- Choosing an Operating System
- Managing and Supporting Windows
- Introduction to Supporting Users
- Configure User-Related Issues
- Maintenance and Troubleshooting Fundamentals
- Configuring and Troubleshooting Operating System Features
- Utility Software
- Notebooks, Tablets, PDAs, and other Handheld Devices
- Supporting Printers
- Connecting PCs to Networks and the Internet (Brief Discussion)
- Home Technology Integration (HTI+) **Optional**