

**NORTHEASTERN TECHNICAL COLLEGE
COURSE OUTLINE**

COURSE:	PREFIX	NO:	EFFECTIVE DATE	NEXT REVIEW DATE
	CPT	285	Spring 2009	Fall 2009
TITLE:			CREDITS	CONTACTS
				CLASS - LAB - TOTAL
PC Hardware Concepts			3	3 0 3

PREREQUISITES: CPT 114 with grade of "C" or better.

DESCRIPTION: This course focuses on installing and upgrading microcomputer hardware and identifying malfunctions.

TEXTBOOK(S) OR ALTERNATIVE:

- A+ Guide to Managing & Maintaining Your PC, Sixth Edition, Andrews, Course Technology, A division of Cengage Learning, 2008. (ISBN 0-619-21758-8)
- Accompanying Lab Manual (ISBN 0-619-21763-4)
- LabSim for A+ IT Technician (ISBN 1-4180-8098-5)
- LabSim for A+ Essentials (ISBN 1-4180-8096-9)

CLASS MANAGEMENT ACTIVITIES (Attendance, tardies, testing, etc.):

Academic Dishonesty:

NETC honors the state TEC Student Code with regard to Academic Dishonesty. Students should read pages 9 - 11 of the Student Code.

Written Assignments:

The instructor reserves the right to refuse any paper or project that is messy or unreadable or appears to be copied. Incorrect grammar and spelling errors will be noted. Papers and projects will be graded on the basis of content, organization, grammar, spelling, and neatness. Papers containing any plagiarized material will result in a grade of "F" on the paper.

Attendance:

The student will be dropped after their:

6th absence for *Monday/Wednesday* or *Tuesday/Thursday* DAY students;
or 3rd absence for Evening students.

NOTE: Summer students may miss no more than 2 absences at night or 8 during the day.

The Student will be marked as "Tardy" when arriving after the class roll has been called. Three (3) tardies will constitute one absence.

In the event that the student misses more than the allowable absences, the Instructor, who will complete a Withdrawal form with a grade of "F", will drop the student. IF the Student wishes to withdraw from the class, the **STUDENT** must complete a withdrawal form, which can be found in the Student Development Office of the College. The Student will receive a grade of "W" if the work completed to date

is acceptable and not after the deadline for withdrawal; a grade of "WF" will be assigned if the work is unacceptable.

Class Policy:

During either a test or lab project, anyone caught exchanging information or copying someone else's work will receive a grade of "F" for the project or test and the Vice President for Student Services will be notified of the act.

There is to be no food or beverages in the computer lab at any time.

All lab diskettes are to be turned in to the Instructor before the Student leaves the classroom. **NO** diskettes are to be taken from the classroom.

Electronic communication devices (pagers, cell phones, etc.) are to be off during class. On call emergency personnel should see the instructor for an exemption.

Computer Responsibilities:

Software is protected by copyright and licensed for use by NETC only. Software may not be removed, transferred, copied or modified.

Computers are available for use only during scheduled or assigned hours. Student users have priority. Users may not abuse or alter any computer capabilities or settings.

NETC provides access to the Internet for educational and research purposes. The college prohibits use of computer facilities for hacking accounts at NETC or any other location; games, chatting; persona e-mailing; downloading or trading programs or copyrighted music, movies or pictures, changing settings; browsing offensive sites or transmitting illegal, unlawful or obscene information. NETC computers may not be used for personal gain or profit. Access to personal e-mail accounts without specific permission is prohibited due to e-mail delivery of viruses.

Student ID:

It is **mandatory** that every student wear his or her student ID at all times when on the Cheraw campus.

Instructors are required to dismiss students without ID from class. The student may get his/her ID (or go to Student Services and purchase a temporary blue and white stick on tag ID for one day for \$1.00 or a permanent ID for \$3.00) and return to class before the midpoint of the class. If the student cannot get an ID and return to class by the midpoint, the instructor will record the absence.

DISABILITIES STATEMENT:

Students with disabilities are encouraged to contact the Vice President for Student Services to discuss needs or concerns as they pursue an academic program and participate in campus life. The Vice

President for Student Services will provide guidance regarding official documentation of disabilities and/or accommodation of needs. (See College Catalog).

RESOURCES: LabSim Software, Computer labs and lab assistants

COURSE TOPICAL OUTLINE (List topics and sub-topics of course) and Calendar or approximate length of time devoted to topic.

TENTATIVE OUTLINE

WEEK 1&2	Chapter 1:	How hardware Works
WEEK 3&4	Chapter 2:	How Hardware & Software Works Together
WEEK 5&6	Chapter 3:	How to Work Inside a Computer Case
WEEK 7	Chapter 4:	Form Factors and Power Supplies
WEEK 8	Chapter 5:	Processors and Chipsets
WEEK 9	Chapter 6:	Motherboards
WEEK 10	Chapter 7:	Upgrading Memory
WEEK 11	Chapter 8:	Hard Drives
WEEK 12	Chapter 9:	Installing and Support I/O Devices
WEEK 13&14	Chapter 10:	Multimedia Devices and Mass Storage

OBJECTIVES OF COURSE: Upon successful completion of this course, the student should be able to:

Demonstrate knowledge of the following concepts:

1. Installation, configuration, and Upgrading of PC Hardware
 - a. Identify the names, purpose, and characteristics of system modules.
 - b. Identify basic procedures of adding and removing field replaceable modules.
 - c. Identify the names, purposes, and performance characteristics of standardized/common peripheral ports, associated cabling, and their connectors.
2. Diagnosing and Troubleshooting:
 - a. Recognize common problems associated with each module and their symptoms, and identify steps to isolate and troubleshoot the problem.
 - b. Identify basic troubleshooting procedures and tools.
 - c. Identify the various types of preventive maintenance measures.
3. Motherboard/Processors/Memory
 - a. Distinguish between the popular CPU chips in terms of their basic characteristics
 - b. Identify the types of RAM, form factors, and operational characteristics.
 - c. Identify the types of motherboards, their components, and architecture.
 - d. Identify the purpose of CMOS memory and how to manipulate the parameter

INSTRUCTIONAL METHODS TO COMPLETE OBJECTIVES:

Lectures
Tests
Simulations

GRADING SCALE:

A = 90 - 100
B = 80 - 89
C = 70 - 79
D = 60 - 69
F = 69 AND BELOW

The following percentages will be used to calculate your final average for this course:

Projects.....	40%
Tests.....	40%
Final Exam.....	20%

COLLEGE-WIDE COMPETENCY:

The student will be able to identify and use sources of information by utilizing information processing skills compatible with job demands in a computer-literate society.