

East Carolina University  
College of Technology and Computer Science  
Department of Technology Systems

## **ICTN 1500: PC Hardware Course Syllabus**

### **General Information:**

**Catalogue Description:** Hardware components of PCs and BIOS and operating system options needed to support those components. Topics include interface standards, component **configuration**, and troubleshooting.

**Prerequisites:** None

**Major Requirement:** ICTN 1500 is a required course for the ICTN major.

**Program Outcomes:** This course meets the ICTN program outcomes by providing students knowledge in network routing and switching and the methods used to implement this current technology.

### **Texts:**

1. A+ GUIDE TO HARDWARE: Managing, Maintaining, and Troubleshooting by Andrews, 3rd Edition, Course Technology Inc. ISBN: 1-4188-3561-7
2. LAB MANUAL: For A+ Managing and Maintaining Your PC, by Andrews, 5th Edition, Course Technology Inc. ISBN: 1-4188-3564-1

### **Supplemental References (recommended, but not required):**

None

### **Course Objectives:**

Upon completion of the course, students should be able to perform the following tasks:

- Describe how computer hardware components work with software components.
- Convert Binary to decimal or decimal to binary.
- Identify and install various hardware components and the software they need to properly function.
- Describe and configure system resources within a computer system.
- Diagnose, repair, or replace various hardware components.
- Identify and repair power related problems within a computer system.
- Describe the hazards to computer systems and take steps to prevent or control those hazards.
- Describe and perform various PC maintenance functions to prolong the life of the PC.
- Simulate the location and purchase of all the required components to assemble a complete PC.
- Identify and correct various PC related network problems.

**Computer and Software Programs:**

The Department of Technology Systems requires that all students buy a computer for use in their classes. A laptop is recommended and is required by some degree programs. You can go to the ACE departmental guidelines at <http://www.ecu.edu/ace/departments.htm> to find out more about the required computer for your specific degree program. It is also advisable to contact your advisor or program coordinator as well.

**Academic Integrity:**

Academic honesty is a serious issue and students are expected to follow the University guidelines for academic honesty. All information included in assignments should be properly cited and referenced. Students are expected to avoid plagiarism and cite sources completely, including all electronic sources. The following web sites are provided for clarification on plagiarism and how to avoid it.

ECU's Writing Center, section on Plagiarism:

<http://www.ecu.edu/cs-acad/writing/writingcenter/guides.cfm>.

ECU Student Handbook, section III on Academic Integrity:

<http://www.ecu.edu/studenthandbook/policies.htm>

**Topics Covered in this Course:**

<b>Week</b>	<b>Topic(s) Covered</b>
Week 1	Chapter 1: How Computers Work
Week 2	Chapter 2: How Hardware and Software work Together
Week 3	Chapter 3: Electricity and Power Supplies
Week 4	Chapter 4: The Motherboard
Week 5	Chapter 5: Managing Memory
Week 6	Chapter 6: Floppy Drives
Week 7	Chapter 7: Understanding and Installing Hard Drives
Week 8	Chapter 8: Supporting I/O Devices
Week 9	Spring Break
Week 10	Chapter 9: Multimedia Devices and Mass Storage
Week 11	Chapter 10: Supporting Modems
Week 12	Chapter 11: PCs on Networks
Week 13	Chapter 12: Notebooks, Tablet PCs, and PDAs
Week 14	Chapter 13: Supporting Printers

**Disabilities:**

East Carolina University seeks to comply fully with the Americans with Disabilities Act (ADA). Students requesting accommodations based on a disability must be registered with the Department for Disability Support Services located in Slay 138. Contact number for Disability Services is 252.737.1016 (Voice/TTY).

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## ICTN 1500: PC Hardware Course Addendum

### **General Information:**

#### *Instructor Information:*

Instructor:	Mr. Sam Khoury
Email:	khourys@ecu.edu
Campus Address:	Slay 221
Phone:	252.328.9644
Office hours:	TTH 1:30-2:50 and 5:00-6:00

#### *Course Information:*

Credit Hours:	Three
Class Room Hours:	Lecture MW 11:00am - 11:50am, Lab M 2:00am to 3:50pm
Class Room Number:	Science and Technology 230 (Lecture) and 151 (Lab)

### **Structure of the Course:**

This course meets two times a week, each Monday and Wednesday from 11:00-11:50 am in SZ 230 for Lecture and Monday from 3:00-4:50 PM in SZ 151 for Lab. The principle types of classroom activities that a student should be prepared for in this course include the following:

1. **Lectures:** These lectures will expand upon, illustrate, and supplement the material in the text. The slides for each lecture will also be posted on blackboard for review before class.
2. **Homework Assignments:** Problems pertaining to the subject matter will be assigned during the term. It is the responsibility of the student to get homework from the instructor for any course missed. All homework assignments are due as posted. No submission of late homework assignments will be accepted.
3. **Quizzes:** These quizzes will be given in class at the end of lectures in order to provide an incentive for individual students to attend regularly and be prepared for class.
4. **Examinations:** There will be 3 or 4 exams given this semester. You should be prepared to be in class for these exams. No make-up of examinations is given. There will also be one hands-on exam given at the end of the course.
5. **Group Projects:** There will be several small group projects in this course. Students should be able to complete these projects in class.
6. **Labs:** Students are expected to complete the labs with little or no supervision. The object is for the students to learn to work in teams, solve problems, and master the hands-on requirements. Your instructor should be your last resort when you are stuck on a lab. You are expected to notify your instructor when you need to come to an open lab to complete any labs that you have not completed and to practice for the hands-on final. Your instructor will insure that you have access to the lab. Give your instructor enough notice, if you will need to use the lab.
7. **E-mail and Blackboard:** E-mail and Blackboard is used extensively in this class. You are expected to read all e-mail you receive from your instructor. It is primary means of communication outside of class. In case of emergencies, your instructor may need to provide you with important information. Always check your e-mail the morning of class for important reminders and any emergencies.
8. **PC Repair Toolkit:** PC Repair Kit with anti-static strap is required. This kit should not cost more than \$30. You can share a repair kit with another student.

**Grading Policy:**

All grades will be posted in Blackboard. Grades are taken from exams, homework, quizzes, and group projects. The following will be the grading scale for this course:

**Weighted Scale for Grades Include:**

Quizzes	10%
Exams	30%
Closed Book Finals	40%
Labs	10%
Group Projects	10%

93% and up	A
85% up to 92%	B
77% up to 84%	C
65% up to 76%	D
Less than 65%	F

**Attendance Policy—Class Participation:**

Attendance for this course will be recorded at each class session. Arriving late and/or leaving class early is extremely disruptive and annoying to the instructor and to other students taking the course. For those students who arrive late or leave early more than 5 times during the course will lose 5 points from their final grade. For every missed class period, one point will be lost from the final grade. Students attending class should plan on staying until all materials have been covered and the instructor has dismissed the class.

The class sessions will consist of lectures, class discussion, and labs. Class attendance and participation is essential to learning the topics presented. Additional materials for each class discussion will also be distributed. As a student, you are expected to complete assigned readings prior to class and be prepared to participate in the discussion. By asking questions and sharing your ideas and experiences, the class will be more beneficial for everyone.

**Computer and Software Programs:**

Specific computer programs required in this course include Microsoft Office (Word, Excel, PowerPoint), Internet Explorer, High Speed Access is recommended, and Windows Media Player.

**Detailed Course Outline with Assignments:**

<b>Week</b>	<b>Dates</b>	<b>Topic(s) Covered</b>
Week 1		Introduction and discussion of syllabus. Sign that you have received and read the syllabus. Discuss the assigned chapter Complete assigned Quizzes
Week 2		Discuss the assigned chapter Complete assigned Quizzes
Week 3		Discuss the assigned chapter Complete assigned Quizzes Complete class project 1
Week 4		Discuss the assigned chapter Complete assigned Quizzes Test 1 (Chapters 1-4)
Week 5		Discuss the assigned chapter Complete assigned Quizzes Complete class project 2
Week 6		Discuss the assigned chapter Complete assigned Quizzes
Week 7		Discuss the assigned chapter Complete assigned Quizzes Complete class project 3
Week 8		Discuss the assigned chapter Complete assigned Quizzes Test 2 (Chapters 5-8)
Week 9		Spring Break
Week 10		Discuss the assigned chapters Complete assigned Quizzes
Week 11		Discuss the assigned chapters Complete assigned Quizzes Complete class project 4
Week 12		Discuss the assigned chapters Complete assigned Quizzes
Week 13		Discuss the assigned chapters Complete assigned Quizzes Test 3 (Chapters 9-12)
Week 14		Complete Hands-on and Written Finals