Guide to Hardware: Managing, Maintaining, and Troubleshooting

Instructor: John E. Abrams
Office: Office CSS Offices
Office Hours: Immediately after class for forty-five minutes
Phone: 925-8700 - You can leave a message
E-mail: jeabrams@unm.edu
Classroom: B127

Course Title Number and Section: Intro Hardware Installation IT 131-501
Class Times: Monday and Wednesday 9:00 to 10:15 – 16 weeks
Semester Date and Duration: Start date 08/17/2015 - End date 12/21/2015
CRN: 50275
Prerequisites: IT 125

Course Description: The purpose of this course is to prepare students to take and pass the CompTIA national A+ Technician certification test. Students will learn component and operating system functions, structures, and operations. This includes file management, and memory management and various operating system requirements and installation techniques. Students will also practice proper safety procedures, perform scheduled preventative maintenance, and installation of computer components. In addition, students will configure, diagnose, and troubleshoot stand-alone computers. Finally, students will learn and apply industry accepted customer service skills.

Textbook: Subscription to LabSim PCPro http://testout.com

Course Objectives
Students will be able to identify, explain, define and demonstrate the step-by-step approach for the fundamentals of supporting and troubleshooting computer hardware. Beginning steps toward CompTIA’s latest A+ 220-701 and 220-702 Exam objectives.
Specific topic coverage includes:
- Identify Hardware
- Explain Operating Systems
- Demonstrate working with People in a Technical World
- Identify Form Factors, Power Supplies, and Working Inside a Computer
- Explain the purpose of Motherboards
- Supporting Processors
- Upgrading Memory
- Explaining Hard Drives

Web Site
Supplementary information for the course is available on the Learn Blackboard Course (URL http://learn.unm.edu). The Web site contains class notes, PowerPoint slides, class announcements, the course syllabus, test dates, and other information for the course.

<table>
<thead>
<tr>
<th>Week</th>
<th>Course day date</th>
<th>Topics/Activity</th>
<th>Items Readings and Exams Due</th>
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<tr>
<th>Day</th>
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| Mon   | 8/17    | Welcome and Introduction  
Review Syllabus/ E-mail accounts  
LabSim Familiarization  
Section 1.0 Computing Overview  
Buy storage device and TestOut Key Code/  
Enroll in TestOut/LabSim  
**Course:** TestOut PC Pro 220-801/220-802 |
| Wed   | 8/19    | Section 1.0 Computing Overview Working with LabSim  
Computer Lab Familiarization  
LabSim Familiarization  
Complete 1.1, 1.2, 1.3, 1.4, 2.1, 2.2, 2.3, 2.4, 2.5, LabSim Activities – Review the Information in Fact Sheets, Perform All Labs |
| Mon   | 8/24    | Section 2.0 PC Technician Overview and Section 3.0 System Components  
Complete LabSim. 3.1, 3.2, 3.3, 3.4 - Perform all Labs and Read/Understand Fact Sheets |
| Wed   | 8/26    | LECTURE, SECTION 3  
Section 3.0 System Components Overview  
Complete LabSim 3.5, 3.6, 3.7 - Perform all Labs and Read/Understand Fact Sheets |
| Mon   | 8/31    | Section 3.0 System Components  
Complete LabSim 3.8, 3.9, 3.10, 4.1- LabSim Activities - Perform all Labs and Read/Understand Fact Sheets |
| Wed   | 9/2     | Section 4.0 Peripheral Devices Overview  
Complete LabSim 4.2, 4.3, 4.4, 4.5, 4.6 - Perform all Labs and Read/Understand Fact Sheets |
| Mon   | 9/7     | Section 5.0 Section Storage Overview  
Complete LabSim, 5.1 – 5.5 LabSim Activities  
- Perform all Labs and Read/Understand Fact Sheets |
| Wed   | 9/9     | Section 5.0 Storage  
Complete LabSim 5.6 – 5.10 LabSim Activities- Perform all Labs and Read/Understand Fact Sheets |
| Mon   | 9/14    | **CHAPTERS 1-5 EXAM**  
(Online Take-home Opens Today)  
Hardware Take Apart Demo  
Practice Hardware Take Apart |
| Wed   | 9/16    | Section 6.0 Networking Overview (cont’d)  
Complete Missing Assignments to date  
Practice Hardware Take Apart  
Complete LabSim 6.1 – 6.4 LabSim Activities  
Complete Missing Assignments to date |
| Mon   | 9/21    | Section 6.0 Networking Overview (cont’d)  
Practice Hardware Take Apart  
**Hardware Skills Exam (Group 1)**  
Complete LabSim 6.5 – 6.10 LabSim Activities  
**Practice Hardware Take Apart**  
**Chapters 1-5 Exam Due** |
| Wed   | 9/23    | Section 6.0 Networking Overview (cont’d)  
**Hardware Skills Exam (Group 2)**  
Complete LabSim 6.11 – 6.14 LabSim Activities  
Practice Hardware Take Apart |
| Mon   | 9/28    | **LECTURE, SECTION 7.0**  
Section 7.0 Printing Overview  
Complete LabSim 7-1, 7.2, 7.3, 7.4, 7.5 LabSim Activities |
| Wed   | 9/30    | Section 8.0 Mobile Devices Overview  
Complete LabSim 8.1 – 8.4 LabSim Activities |
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<th>Date</th>
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<tbody>
<tr>
<td>8 Mon</td>
<td>15 10/5  Section 10.0 System Implementation Complete LabSim 10.1 – 10.5 LabSim Activities</td>
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<td>16 10/7  Section 9.0 Windows System Management Overview Complete LabSim 9.1 – 9.5 LabSim Activities</td>
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<td>9 Mon</td>
<td>17 10/12 Columbus Day</td>
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<td>18 10/14 Section 9.0 Windows System Management (cont’d) Complete LabSim 9.6 – 9.9 LabSim Activities</td>
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<td>10 Mon</td>
<td>19 10/19 LECTURE SECTION 11 Section 11.0 File Management Overview Complete LabSim 11.1 – 11.5 LabSim Activities</td>
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<td>20 10/21 CHAPTERS 6-11 EXAM (Online Take-Home Opens Today) Section 12.0 Security Overview Complete Missing Assignments to date</td>
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<td>11 Mon</td>
<td>21 10/26 Section 12.0 (cont’d) Complete LabSim 12.6 – 12.10 LabSim Activities</td>
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<td>22 10/28 Section 13.0 Troubleshooting Complete LabSim 13.1 – 13.11 LabSim Activities Complete Capstone Exam 14.1 and 14.2 -Building a Computer and Troubleshooting a Computer</td>
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| 12 Mon| 23 11/2 1. Student Presentations for Final Review
          2. Capstone, Module 14.0 1. Student Presentation for Final Review
|       | 24 11/4  PC Pro Certification Practice Exam (Labs) PC Pro Certification Practice Exam (Labs) |
| 13 Mon| 25 11/9  |
|       | 26 11/11 Make-Up Day Complete all including missing assignments |
| 14 Mon| 27 11/16  |
|       | 28 11/18 Student Presentations  |
| 15 Mon| 29 11/23 Student Presentations  |
|       | 30 11/25 Final Review  |
| 16 Mon| 31 11/30 Final Review  |
|       | 32 12/2 PC Pro Exam FINAL In Class Final Exam  |
| 17 Monday | 33 12/7  |

E-Mail All students must have a UNM e-mail account. If you have any questions about the course or need assistance, please contact me in person or by telephone during office hours; or by...
e-mail at any time. All quizzes and tests are going to be taken using LabSim. Grades will be posted to Blackboard weekly.

**Grading and Evaluation Criteria**

70% of the grade is based on Assessments.

20% of the grade is based on completion of the lab exercises that will be assigned as the second part of each class session.

10% of the grade will be based on a class presentation based on common scenarios of PC hardware and software issues that users encounter daily in a typical organization.

These percentages will be used to assign final grades:

- **A+ = 100–98**
- **A = 97–94**
- **A- = 93–90**
- **B+ = 89–87**
- **B = 86–84**
- **B- = 83–80**
- **C+ = 79–77**
- **C = 76–74**
- **C- = 73–70**
- **D+ = 69–67**
- **D = 66–64**
- **D- = 63–60**
- **F = 59–0**

**Computer Lab Responsibility:**

Please be advised that use of computer labs on UNM properties is governed by “Policy 2500: Acceptable Computer Use” which can be found at [http://policy.unm.edu/university-policies/2000/2500.html](http://policy.unm.edu/university-policies/2000/2500.html). Food and drink are also prohibited in any computer lab on campus. Anyone violating these policies is subject to possible suspension and loss of computer lab privileges.

**UNM Email/Black Board Learn Access**

UNM-Valencia students must have a UNM Net ID which can be created by going to: [http://it.unm.edu/accounts/](http://it.unm.edu/accounts/).

The UNM Net ID will give you access to the computer labs on campus, blackboard learn and UNM Email.