IT Hardware Support INFO-1242 Course Syllabus Spring 2026

"Responsibility for learning belongs to the student, regardless of age" Robert Martin

Contents

Keys to Success: Show Up, Work Hard, Ask for Help

Your Instructor

William A Loring

Mailing Address: 1601 E 27th St, Scottsbluff, NE 69361

Scottsbluff Office: Room B7F Office Phone: 308.635.6163

E-mail: loringw@wncc.edu (Preferred contact method)

Scottsbluff Office Hours: MW 3:15-4 pm, TTh 11:30-12:30 pm or by appointment

Online Office Hours: By appointment. www.calendly.com/loringw

 "There are no stupid questions. Ask questions whenever something isn't completely clear. You can't remember what you don't understand."

Tolerate chaos, uncertainty, and vagueness. "Figuring it out" is part of learning.

Class Information

Class Location: Scottsbluff, Room D1

Time: MW 2:00-3:15 pm

Pre/Co-requisite

None

Catalog Description

This course is an introduction to computer, mobile device, and other information technology hardware. There is an emphasis on the skills necessary to pass the Computing Technology Industry Association (CompTIA) A+ hardware certification exam. Additional topics covered are communication skills, security, installation, troubleshooting, optimization, support, networking, and maintenance of IT environment hardware. The student is encouraged to take the CompTIA A+ hardware certification exam. The CompTIA A+ software and hardware exam are both required for A+ certification. A current CompTIA A+ certification is accepted as equivalent to this class. Please contact the instructor for details.

3 semester hours

(3/45/0/0/0/0) See Figure 1

Course Objectives

Using this course as an instructional medium, the instructor will:

1. Recognize and define common personal computer, computing device, and other hardware support syntax, terms, and concepts.

2. Explain the purpose and function of the basic components of a personal computer and computing device hardware.

3. Demonstrate and model problem solving and troubleshooting techniques with personal computers and other computing devices.

4. Model self-directed and lifelong learning.

Student Learning Outcomes

Upon completion of this course, the student will be able to:

1. Recognize and define common personal computer, computing device, and other hardware support syntax, terms, and concepts. [GE 1, 2]

2. Describe the basic components of a personal computer and other computing devices hardware. [GE 1, 2]

3. Apply problem solving and troubleshooting techniques with personal computers and other computing devices. [GE 1, 2]

4. Self-direct their learning while gaining an ongoing interest in learning more about personal computers and other computing devices. [GE 5]

Instructional Materials

The materials required for this course are included in [Cengage Unlimited](), a subscription service providing access to ALL Cengage ebooks and digital learning products. One Cengage Unlimited subscription can be used across all courses where Cengage products are assigned, at no additional cost.

Required MindTap Access Code (Includes the eBook and labs)

- 9780357700037 Cengage Unlimited (4 month access)
- 9780357700044 Cengage Unlimited (12 month access)

The access code or textbook can be purchased at: Cougar Bookstore, Scottsbluff Campus, (308) 635-6066, or online at http://bookstore.wncc.edu

MindTap contains the eBook and online labs used in this class. Access to both is within Blackboard. Buying the physical book is optional. The MindTap eBook can be accessed by any computer or mobile device.

Other Materials

- Computer with the ability to run VirtualBox or another virtualization software. (Can be a Mac.)

- Windows computer that you can install software on

- Older or non-functional personal computer to take apart

A+ Certification Exam

There is a PearsonVue testing center at the Harms Center in Scottsbluff. WNCC is a CompTIA Authorized Academy and receives a 50% discount on test vouchers. There are two exams for the CompTIA A+ certification.

CompTIA A+ Hardware Exam # 220-1001

CompTIA A+ Software Exam # 220-1002

If you pass the Hardware Exam, you will receive an A+ for the class.

Course Schedule

Course content may vary from this outline to meet the needs of this particular group.

Week	Learning Activities	Assignments
Week 1 01/13 - 01/19	Introduction Discussion Introduction to Course Module 1 Taking a Computer Apart and Putting It Back Together MW 2:00-3:15 pm: Online & Live Class	Getting Started activities in Blackboard Professional Communication Getting Started Quiz Module 1 PowerPoint and Flashcards Lab 1-1: PC Audio and Video Connectors Lab 1-3: Using Motherboard Connectors Core 1 (220-1001) Pre-Assessment Quiz
Week 2 01/20 - 01/26	Module 1 Taking a Computer Apart and Putting It Back Together MW 2:00-3:15 pm: Online & Live Class	Lab 1-1: Identify Internal Parts of a Computer

		Lab 1-3: Identify Parts Inside a Laptop and All-in-One Computer
		Examine BOIS/UEFI Settings
		Chapter Quiz
Week 3 01/27 - 02/02	Module 2 All About Motherboards MW 2:00-3:15 pm: Online & Live Class Think Aloud	Module 2 PowerPoint and Flashcards Lab 1-6: Remove Motherboard, Power Supply, and Drives Lab 1-7: Install Components Inside the Case Lab 2-1: Matching a Processor to a Motherboard and Socket Lab 2-2: Using Msinfo32 Memory and Components Chapter Quiz
Week 4 02/03 - 02/09	Module 3 Supporting Processors and Upgrading Memory MW 2:00-3:15 pm: Online & Live Class	Module 3 PowerPoint and Flashcards Lab 1-9: Disassemble a Laptop Lab 3-1: Installing Processor and Connecting Power Lab 3-2: Upgrading Laptop Memory Disassemble and Reassemble a PC Chapter Quiz
Week 5 02/10 - 02/16	Module 4 Power Supplies and Troubleshooting Computers MW 2:00-3:15 pm: Online & Live Class Think Aloud	Module 4 PowerPoint and Flashcards Lab 4-2: Using Good Troubleshooting Methodology Lab 4-1: Troubleshooting Memory Lab 4-2: Methods of System Cooling

		Lab 4-3: Replacing Power Supply
		Power Supply Purchase
		Motherboard Research
		Chapter Quiz
Week 6 02/17 - 02/23	Module 5 Hard Drives and Other Storage Devices MW 2:00-3:15 pm: Online & Live Class	Module 5 PowerPoint and Flashcards Lab 5-1: Inside the Hard Drive Lab 5-2: Using SD Storage and Portable Media Lab 5-1: Select and Install a Storage Drive Identify the Hardware on Your PC with Software Chapter Quiz
Week 7 02/24 - 03/02	Module 6 Supporting I/O Devices MW 2:00-3:15 pm: Online & Live Class Think Aloud	Module 6 PowerPoint and Flashcards Lab 6-1: Install Peripheral Devices Lab 6-3: Identify Video Ports and Connectors Windows Virtualization Chapter Quiz
Week 8 03/03 - 03/07	Module 12 Installing Windows MW 2:00-3:15 pm: Online & Live Class	Module 12 PowerPoint and Flashcards Lab 12-1: Media Creation Tool Device Manager Routine Maintenance Windows Full Shutdown Chapter Quiz

03-10 – 03-16	Spring Break	
Week 10 03/17 – 03/23	Module 13 Maintaining Windows MW 2:00-3:15 pm: Online & Live Class	Module 13 PowerPoint and Flashcards Lab 13-1: Using System Restore Lab 13-2: Verifying TCP IP Settings Belarc Advisor Build a PC Project Batch Files Command Line Chapter Quiz
Week 11 03/24 – 03/30	Module 7 Networking Fundamentals MW 2:00-3:15 pm: Online & Live Class Visualize: How Subnets and Subnet Masks Work Think Aloud	Module 7 PowerPoint and Flashcards Lab 7-1: Investigating Network Connection Settings Lab 7-2: Clearing DNS Cache Lab 7-3: Connect a Computer to a Network ZenMap Enumerate a Network Chapter Quiz
Week 12 03/31 – 04/06	Module 8 Network Infrastructure and Cloud Computing MW 2:00-3:15 pm: Online & Live Class	Module 8 PowerPoint and Flashcards Lab 8-2: Cable Tester Lab 8-1: Set up Wi-Fi and Configure Port Forwarding Lab 7-4: Install and Configure a SOHO Router Install and Use Packet Tracer

		OSI Model Understanding Chapter Quiz
Week 13 04/07 – 04/13	Module 17 Securing and Sharing Windows Resources MW 2:00-3:15 pm: Online & Live Class Visualize: How Share Permissions and NTFS Permissions Work Think Aloud	Module 17 PowerPoint and Flashcards Lab 7-1: Work with IP Addresses and Subnets Static IP Address Packet Tracer SOHO Network Wireless Network Scanning
Week 14 04/14 – 04/20	Module 17 Securing and Sharing Windows Resources MW 2:00-3:15 pm: Online & Live Class Personal Development Reflection	Lab 17-1: Using Password Manager Network Two Computers Packet Tracer Simple Routing Chapter Quiz
Week 15 04/21 – 04/27	Module 9 Supporting Mobile Devices MW 2:00-3:15 pm: Online & Live Class IT Jobs Discussion	Module 9 PowerPoint and Flashcards Lab 9-1: Syncing to the Cloud Mobile Anti-Virus/Malware Packet Tracer Smart Home IoT Network Chapter Quiz
Week 16 04/28 – 05/04	Module 10 Supporting Printers MW 2:00-3:15 pm: Online & Live Class Lessons Learned Discussion	Module 10 PowerPoint and Flashcards Lab 10-1: Install and Configure a Printer Lab 10-2: Install a Network Printer Chapter Quiz
Finals		Final Project

05/05 - 05/09		Core 1 (220-1101) Post-Assessment Quiz

Academic Integrity

The academic integrity policy for this course includes the Institutional Academic Integrity Policy listed at the end of this document.

1. Do your own work.

2. You can ask for help if you get stuck. It is OK to have a study buddy to help with problems or issues. It is not OK to turn in the same assignment as someone else.

3. If you use someone else's work for a small quote or reference, cite the source.

4. Use your own words.

5. Do your own work. We are here to learn. You can't learn without doing the work.

Artificial Intelligence (AI)

AI is best used ethically and responsibly.

1. AI (ChatGPT, etc.) is a tool, just like a pencil, a computer, or Google. All work submitted must be your own. You may not submit any work generated by an AI program as your own.

2. You will be working with AI in the workplace. Certain homework assignments will involve the use of AI technologies. The aim of these assignments is to familiarize you with practical AI applications.

3. If an assignment permits AI: Include the AI name, the prompt and the result.

4. Do not pass AI work off as your own.

NOTE: If an assignment seems out of character or not in the style we have been using in class: you will receive a 0 until you contact the instructor to explain how you arrived at this code.

AI use indicators:

 No AI use: It is important for acquiring skills that you are able to do this assignment on your own.

AI can be used as a debugger or tutor. Include the prompt and results.

AI can be used as a code helper. Include the prompt and results.

Minor Violations: First offense: Grade of 0 for the assignment.

Major Violations: Second offense: Grade of F for the class.

Do your own work.

Assignment Creativity

As long as your assignment submission meets the requirements of the tutorial or assignment, you are free to embellish the resulting work as much as you wish before submission. This is where the real learning starts.

Attendance

In addition to the WNCC Attendance policy (in the WNCC Master Syllabus Contents) you are required to turn in your weekly notes to be considered attending this class.

[WNCC Master Syllabus Contents](#)

This link contains the common WNCC Syllabus policies.