



## Microcomputer Operating Systems

IT 125 / CRN# 45873

Fall 2021

James Hart

[hart56@unm.edu](mailto:hart56@unm.edu) / ph. 505.239.3435

Flexible Contact Hours:

MW 12:00 PM – 3:00 PM

TTh 9 AM – 11:00

or ARR

### COURSE DESCRIPTION

Introduction to microprocessor operating systems – Microsoft Windows, Linux, Apple's OSX. Course work includes security, software troubleshooting (GUI and command line), operating system procedures.

#### Course Goals:

*Prepare students to have the knowledge, skills, and abilities to pass the CompTIA 1002 certification exam*

#### EMAIL

Be sure to check your contact information in Banner and keep it updated. UNM email as our official form of course communication. When communicating with your instructor always include class name in the subject header.

#### Student Learning Outcomes/Course Objectives (see also [CompTIA 220-1002-exam objectives.pdf](#))

- Compare and contrast common operating system types and their purposes
- *Summarize general OS installation considerations and upgrade methods*
- *Given a scenario, demonstrate Microsoft's and Linux's command line tools*
- *Given a scenario, demonstrate Microsoft operating system features and tools.*
- *Given a scenario, demonstrate Microsoft's Control Panel utilities*
- Given a scenario, use features and tools of the Mac OS and Linux client/desktop operating systems.
- Security
  - Summarize importance of physical security measures
  - Explain logical security concepts
  - Compare and contrast wireless security protocols
  - Demonstrate how to detect, remove, and prevent malware
- *Software Troubleshooting*
  - *Resolve common Microsoft Windows problems*
  - *Resolve given PC security issues*

- Given a scenario, *configure a laptop and other mobile device*
- *Troubleshooting device and network issues*
- *Compare and contrast cloud computing concepts and set up client virtualization*
- *Demonstrate how to follow best practices for communication and professionalism*

## TECHNICAL SKILLS

In order to participate and succeed in this class, you will need to be able to perform the following basic technical tasks:

- Use UNM Learn (help documentation located in "How to Use Learn" link on left course menu, and also at [Online Student Documentation](#) ). Also, UNM-Valencia provides a Blackboard Learn Jumpstart self-learning module to give you practice with the most commonly used tools in UNM Learn. Ask your instructor if you do not see the UNM-Valencia Blackboard Learn Jumpstart in your list of classes in UNM Learn.
- Use email – including attaching files, opening files, downloading attachments
- Use the in-course web conferencing tool (Collaborate Web Conferencing software in UNM Learn) or use Zoom or other web conferencing tool
- Download and install an application or plug in – required for participating in web conferencing sessions

## TECHNICAL REQUIREMENTS

### Computer

- A high-speed Internet connection is highly recommended.
- Supported browsers include: [Detailed Supported Browsers and Operating Systems](#)
- Any computer capable of running a recently updated web browser should be sufficient to access your online course. However, bear in mind that processor speed, amount of RAM and Internet connection speed can *greatly* affect performance.
- For the best experience when using the Kaltura Media Tools inside UNM Learn, be sure to use a [supported browser](#) on a desktop.
- Microsoft Office products are available free for all UNM students (more information on the [UNM IT Software Distribution and Downloads page](#))
- Please update your contact information in LoboWeb: [MyUNM Login](#). When you log into MyUNM, Enter LoboWeb. Click on the Personal Information link to make sure your contact information is up to date.

## **Web Conferencing**

*Web conferencing will be used in this course during the following times and dates:*

*For the online sessions, you will need:*

- *A USB headset with microphone. Headsets are widely available at stores that sell electronics, at the UNM Bookstore or online.*
- *A high-speed internet connection is highly recommended for these sessions. A wireless Internet connection may be used if successfully tested for audio quality prior to web conferencing.*
- *You should also dress as you would when attending an in-person class, even if you do not turn on your video camera.*

## **Technical Support**

- For UNM Learn Technical Support: (505) 277-0857 (24/7) or use the “Create a Tech Support Ticket” link in your course.
- For UNM-Valencia IT Support: (505)925-8911
- For UNM Web Conference Technical Help: (505) 277-0857

## **Required Textbooks and References:**

- Your account on <https://netacad.com> and UNM’s Learn for IT 125

## **Supplementary Materials:**

- There is a wide variety of Microprocessor skill sets. If you would like to have more detail on any of our topics, please contact me. I’ll be happy to help

## **Required Supplementary Materials:**

*USB Flash Drive (at least 16G)*

## **COURSEWORK AND PARTICIPATION**

### **Instructor Response Time**

*I routinely check the course for postings or emails, Monday through Friday between 7:00 and 10:00 AM. You can anticipate a 24 to 48 hour response from me. If you MUST contact me, please text, but don’t forget I sleep too.*

## Procedures for Completing Coursework

- *Tests and quizzes are posted for completion on the Cisco site and UNM Learn, they need to be taken online. If you have difficulty completing this work, contact your instructor. For most assignments you will have 1 week to complete. If you cannot complete, notify me for options*

## Course Schedule

*There will be one to two recorded lectures per week. Each lecture will have a phrase (ex. "dogs bark"). Who knows where it will appear. To get credit for the lecture you must email me the phrase. The phrase could be anywhere in the lecture.*

## Expectations for Participation

- *time required (9-12 hrs per week)*
- *students are expected to learn how to navigate in Learn and Cisco's Netacad*
- *students are expected to keep abreast of course announcements*
- *students are expected to use the Learn course email as opposed to a personal email address*
- *students are expected to keep instructor informed of class related problems, or problems that may prevent the student from full participation*
- *students are expected to address technical problems immediately*
- *students are expected to observe course netiquette at all times*

## Netiquette

- [Netiquette document](#)

## NOTES TO STUDENTS ABOUT PARTICIPATION IN A COURSE USING UNM LEARN:

### Tracking Course Activity

UNM Learn and Cisco Netacad automatically records all students' activities including: your first and last access to the course, the pages you have accessed, the number of discussion messages you have read and sent, web conferencing, discussion text, and posted discussion topics. This data can be accessed by the instructor to evaluate class participation and to identify students having difficulty

## Grading Scale

Lecture Attendance	10%	A 90 +
Exams	30%	B 80 - 89
Quizzes	20%	C 70 - 79
Practice Final	10%	D 60 - 69
Final	30%	F < 60
Total	100%	

## UNM POLICIES

### Equal Opportunity and Non-Discrimination

In an effort to meet obligations under Title IX, UNM faculty, Teaching Assistants, and Graduate Assistants are considered “responsible employees” by the [Department of Education](#) (see pg. 15). This designation requires that any report of gender discrimination which includes sexual harassment, sexual misconduct and sexual violence made to a faculty member, TA, or GA must be reported to the Title IX Coordinator at the [Office of Equal Opportunity](#).

[Read more about campus policy regarding sexual misconduct.](#)

### Copyright Issues

All materials in this course fall under copyright laws and should not be downloaded, distributed, or used by students for any purpose outside this course.

[The UNM Copyright Guide](#) has additional helpful information on this topic.

### Accessibility and Accommodations

The American with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodations of their disabilities. If you have a disability requiring accommodation, please contact:

- [UNM-Valencia Student Services](#) if you are a Valencia campus student. The phone number is 505-925-8560
- [UNM Accessibility Resource Center](#) in 2021 Mesa Vista Hall if you are a main campus student. The phone number is 505-277-3506.

Information about your disability is confidential and your instructor cannot refer you for accommodations. Be aware that you will need to provide documentation. If you need assistance in obtaining documentation, the offices above can assist you.

## **Accessibility Statements**

[Blackboard's Accessibility statement](#)

[Microsoft's Accessibility statement](#)

*Include links to accessibility statements for all other technologies included in the course.*

## **Academic Integrity**

You should be familiar with UNM's [Policy on Academic Dishonesty](#) and the [Student Code of Conduct](#) which outline academic misconduct defined as plagiarism, cheating, fabrication, or facilitating any such act.

## **Drop Policy**

*UNM Policies: This course falls under all UNM policies for last day to drop courses, etc. Please see or the UNM Course Catalog for information on UNM services and policies. Please see the UNM academic calendar for course dates, the last day to drop courses without penalty, and for financial disenrollment dates.*

## **UNM RESOURCES**

- **Learning Center**  
<https://valencia.unm.edu/campus-resources/the-learning-center/learning-center.html>
- **Form to request a tutoring Appointment**  
<https://esurvey.unm.edu/opinio/s?s=131505>
- **UNM Libraries** – See Links on Class Learn Page
- **Student support and Services** – See Link “Student Support and Services” on Class Learn Page

## **FOR MILITARY-CONNECTED STUDENTS**

There are resources on campus designed to help you succeed. You can approach any faculty or staff for help with any issues you may encounter. Many faculty and staff have completed the GREEN ZONE training to learn about the unique challenges facing military-connected students. If you feel that you need help beyond what faculty and/or staff can give you, please reach out to the Veterans Resource Center on main campus at 505-277-3181, or by email at [vinc@unm.edu](mailto:vinc@unm.edu). The Veterans Coordinator at UNM-Valencia is in the Student Services Office, at 505-925-8560.

## SEMESTER DATES AND DEADLINES

- 3-Sep Enrollment Cancellation for non-payment
- 3-Sep Last day to ADD sections and CHANGE credit hours on LoboWEB.
- 3-Sep Last day to CHANGE grade mode on LoboWEB.
- 6-Sep Labor Day
- 10-Sep Last day to DROP without "W" grade and 100% tuition refund on LoboWeb.
- 10-Sep Last day to ADD sections and/or CHANGE credit hours with form, \$10 per transaction. After this date \$75.
- 14&15 Oct Fall Break
- 12-Nov Last day to DROP without Dean's Permission on LoboWEB.
- 25&26 Nov Thanksgiving
- 10-Dec Last Day for CHANGE grade mode with form
- 10-Dec Last Day to ADD sections and/or CHANGE credit hours with forms \$75 per transaction.
- 10-Dec Last day to DROP with Dean's Permission with form.
- 13-Dec Finals Week
- 17-Dec Last day to report removal of Incomplete.

**COURSE OUTLINE** references <https://contenthub.netacad.com/itn> on the Academy site. The Academy material covers hardware and software (operating systems). This class covers the software sections. Therefore we'll start with chapter 9. (**Please note that this course outline is subject to change. If changes occur, you will be notified**)

Week 1 / August 23

### **Course Introduction**

- Watch Course Intro in Learn
- Read Cisco's **First Time in This Course**
- Read Chapter 9 – Virtualization and Cloud Computing

Week 2 / August 30

### **Modules / Chapter 9**

- Read Chapter 9 – Virtualization and Cloud Computing
  - Virtualization vs cloud computing
  - Private, public , community and hybrid clouds
  - PaaS, SaaS, IaaS and ITaaS
  - Hypervisor
  - Data center
- **Chapter 9 Test**

Week 3 / September 6

**Modules / Chapter 10**

- Read Chapter 10
  - Booting (or from USB and PXE)
  - Booting from USB or PXE
  - Drivers
  - User interface
  - Multiprocessing and multithreading
  - CompTIA quiz

Week 4 / September 13

**Modules / Chapter 11**

- **Chapter 10 Test**
- CompTIA quiz
- Read Chapter 11
  - ISOs
  - MBR/GPT
  - The registry
  - Windows Utilities (ex. The Event Viewer)
  - CLI commands (ex. Chkdsk and taskkill)
  - File permissions
  - Active Directory
  - RAID

Week 5 / September 20

**Modules / Chapter 11**

- CompTIA Practice Quiz

Week 6 / September 27

**Modules / Chapter 12**

- **Chapter 11 Test**
- Read Chapter 12
- CompTIA Practice Quiz
- Linux

Week 7 / October 4

**Modules / Chapter 12**

- MAC OS
- CompTIA Practice Quiz



Week 8 / October 11

**Modules / Chapter 12**

- **Chapter 12 Test**

Week 9 / October 18

**Take MIDTERM**

- Read Chapter 13

Week 10 / October 25

**Modules / Chapter 13**

- Viruses, worms, phishing, spyware, rootkit ,botnet
- Encryption and hashes
- Social Engineering
- Updates
- VPNs
- Firewalls
- Security Policy

Week 11 / November 1

**Modules / Chapter 14**

- **Chapter 13 Test**
- CompTIA Practice Quiz
- Read Chapter 14

Week 12 / November 8

**Modules / Chapter 14**

- CompTIA Practice Quiz
- **Chapter 14 Test**

Week 13 / November 15

**CompTIA A+ 1002 topics**

- CompTIA Practice Quiz

Week 14 / November 22

**CompTIA A+ 1002 topics**

- CompTIA Practice Quiz

Week 15 / November 29

**Cisco Test (Chapters 9 - 14)**

Week 16 / December 6

**ITE 6.0 A+ Cert Practice Exam 1 & 2**

Week 17 / December 13:

**Finals week.**