

## **Syllabus**

### **Online IT 125(CRN #45873) *Microcomputer Operating Systems***

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Office Hours: MW 10:30 AM – 1:00 PM, TTh 10:30 AM – 1:30 PM or ARR

***IT 125: Microcomputer Operating Systems.*** (3) *Introductory concepts in microcomputer operating systems. Acquaints students with practical aspects of microcomputer operating systems including file management systems, utilities, and computer peripherals. Suggested prerequisite: CS 150 with grade of C or better.*

**COURSE STUDENT LEARNING OUTCOMES:** See attached or in course's learn.unm.edu

**TEXTBOOK:** Instructor issues individual student account for Oracle's Database Foundations. From this account: <https://academy.oracle.com/en/oa-sign-in.html> students have access to quizzes and project labs.

**ATTENDANCE POLICY:** Students are required attend class and be on time. If you are unable to attend class please email or text. Four unexcused absences will result in student being dropped.

#### **GRADING POLICY**

#### **LETTER GRADE DETERMINATION**

Labs	30%	A 90 +
Tests	40%	B 80 - 89
Mid Term	10%	C 70 - 79
Final	20%	D 60 -69
Total	100%	F < 60

This course is to prepare students for CompTIA A+ 220-902. To receive the CompTIA A+ certification, you must pass two exams: 220-901 and 220-902. The CompTIA 220-902 measures the necessary skills for an entry-level IT professional. Successful candidates will have the knowledge required to:

- Install, configure and maintain devices, PCs and software for end users
- Understand the basics of networking and security/forensics
- Properly and safely diagnose, resolve and document common hardware and software issues
- Apply troubleshooting skills
- Provide appropriate customer support
- Understand the basics of virtualization, desktop imaging and deployment

## Academic Integrity

Having academic integrity is paramount to your success in any class. Plagiarism or cheating is not tolerated. Any instance of this will result in a grade of zero for that assignment. Here is the link to the UNM Academic Dishonesty Policy:

<https://policy.unm.edu/regents-policies/section-4/4-8.html>. The policy states:

*Each student is expected to maintain the highest standards of honesty and integrity in academic and professional matters. The University reserves the right to take disciplinary action, up to and including dismissal, against any student who is found guilty of academic dishonesty or who otherwise fails to meet the expected standards. Any student judged to have engaged in academic dishonesty in course work may receive a reduced or failing grade for the work in question and/or for the course.*

Academic Dishonesty is defined as:

*"Academic dishonesty" includes, but is not limited to, dishonesty in quizzes, tests, or assignments; claiming credit for work not done or done by others; hindering the academic work of other students; misrepresenting academic or professional qualifications within or without the University; and nondisclosure or misrepresentation in filling out applications or other University records.*

**LIBRARY USAGE:** Be sure to always check out the library if you feel you need additional reading materials. They are open for any order suggestions you may have.

## **STUDENTS WITH DISABILITIES:**

If you have a documented disability, the Equal Access Services office will provide me with a letter outlining your accommodations. I will then discuss the accommodations with you to determine the best learning environment. If you feel that you need accommodations, but have not documented your disability, please contact Jeanne Lujan, the coordinator for Equal Access Services at 925-8910 or [jmlujan@unm.edu](mailto:jmlujan@unm.edu).

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 page 15 - <http://www2.ed.gov/about/offices/list/ocr/docs/qa-201404-title-ix.pdf>). 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 ([oeo.unm.edu](http://oeo.unm.edu)). For more information on the campus policy regarding sexual misconduct, see: <https://policy.unm.edu/university-policies/2000/2740.html>.

**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.

***Dates for Reference :***

January 25	Enrollment Cancellation for non-payment
February 1	Last Day to Drop for 100% Tuition Refund/Last Day to Drop Without a “W”
February 8	Last Day to Change Grading Options
April 12	Last Day to Withdraw Without Student Services Permission
May 3	Last Day to Withdraw with Student Services Permission

**COURSE OUTLINE: Please note that this course outline is subject to change. If changes occur you will be notified.**

Week 1 / Jan, 14

***Introduction***

- Operating Systems
  - Microsoft
  - Apple
  - Linux
- Virtual Environments
  - ESXi
  - Amazon Web Services
  - Oracle
- Install Microsoft Windows (7, 8, and 10)

Week 2 / Jan. 21

**MLK Day Jan. 21**

- Microsoft command line tools
- Microsoft Control Panel utilities

Week 3 / Jan. 28

- Install and configure networking on a Windows client
- Perform common preventative maintenance procedures using the appropriate Windows OS tools

Week 4 / Feb. 4

- Common features of Mac OS and Linux
- Set up a client in virtual space
- Basic Cloud space

Week 5 / Feb. 11

- Properties and purposes of services provided by networked hosts
- Basic features of mobile operating systems
- Configuring basic mobile device network connectivity and email
- Methods and data related to mobile device synchronization

Week 6 / Feb. 18

- Common security threats and vulnerabilities
- Common security prevention methods
- Basic Windows OS security settings
- Deploying and enforcing security best practices

Week 7 / Feb. 25

- Methods for securing mobile devices
- Securing SOHO wireless and wired networks

Week 8 / March 4

- Troubleshoot PC operating systems with appropriate tools
- Troubleshoot PC security issues with appropriate tools and best practices

Week 9 / March 11

***SPRING BREAK***

Week 10 / March 18

- Troubleshoot common mobile OS and application issues with appropriate tools
- Troubleshoot common mobile OS security issues

Week 11 / March 25

- **Weekly “Check in”**

***Subqueries / Section 9 and Ensuring Quality / Section 10***

- With a given scenario use appropriate safety procedures
- Given a scenario with potential environmental impacts, applying the appropriate controls

Week 12 / April 1

- The process of addressing prohibited content/activity, and explain privacy, licensing, and policy content
- Demonstrate proper communication techniques and professionalism
- Troubleshooting

Week 13 / April 8

- More troubleshooting and final review

Week 14 / April 15

- More troubleshooting and final review

Week 15 / April 22

- More troubleshooting and final review

Week 16 / April 29

- More troubleshooting and final review

Week 17 / May 6

*Final or CompTIA 220-902 online exam*

## CompTIA Exam number: 220-902 Course Objectives

- 1.1 Compare and contrast various features and requirements of Microsoft Operating Systems (Windows 7, Windows 8, Windows 8.1, Windows 10)
- 1.2 Given a scenario, install Windows PC operating systems using appropriate methods
- 1.3 Given a scenario, apply appropriate Microsoft command line tools.
- 1.4 Given a scenario, use appropriate Microsoft operating system features and tools.
- 1.5 Given a scenario, use Windows Control Panel utilities.
- 1.6 Given a scenario, install and configure Windows networking on a client/desktop
- 1.7 Perform common preventive maintenance procedures using the appropriate Windows OS tools.
- 2.1 Identify common features and functionality of the Mac OS and Linux operating systems.
- 2.2 Given a scenario, set up and use client-side virtualization.
- 2.3 Identify basic cloud concepts.
- 2.4 Summarize the properties and purpose of services provided by networked hosts.
- 2.5 Identify basic features of mobile operating systems.
- 2.6 Install and configure basic mobile device network connectivity and email.
- 2.7 Summarize methods and data related to mobile device synchronization.
- 3.1 Identify common security threats and vulnerabilities

- 3.2 Compare and contrast common prevention methods.
- 3.3 Compare and contrast differences of basic Windows OS security settings.
- 3.4 Given a scenario, deploy and enforce security best practices to secure a workstation.
- 3.5 Compare and contrast various methods for securing mobile devices.
- 3.6 Compare and contrast various methods for securing mobile devices.
- 3.7 Given a scenario, secure SOHO wireless and wired networks.
- 4.1 Given a scenario, troubleshoot PC operating system problems with appropriate tools.
- 4.2 Given a scenario, troubleshoot common PC security issues with appropriate tools and best practices
- 4.3 Given a scenario, troubleshoot common mobile OS and application issues with appropriate tools.
- 4.4 Given a scenario, troubleshoot common mobile OS and application security issues with appropriate tools.
- 5.1 Given a scenario, use appropriate safety procedures.
- 5.2 Given a scenario with potential environmental impacts, apply the appropriate controls.
- 5.3 Summarize the process of addressing prohibited content/activity, and explain privacy, licensing and policy concepts
- 5.4 Demonstrate proper communication techniques and professionalism.
- 5.5 Given a scenario, explain the troubleshooting theory