SYLLABUS
PART I
EDISON STATE COMMUNITY COLLEGE
CIS 215S IT ESSENTIALS
3 CREDIT HOURS

COURSE DESCRIPTION

Covers PC hardware, operating systems, and troubleshooting with emphasis on installation, configuration, maintenance, and support of modern computer systems. Topics include desktops, laptops, printers, networking, virtualization, cloud fundamentals, security practices, backups, and incident response. Hands-on labs develop practical system management and diagnostic troubleshooting skills. Aligns with CompTIA A+ Core 1 (220-1201) and Core 2 (220-1202) certification exam objectives. Discounted certification exam voucher available upon successful completion of the course. Prerequisite: CIS 111S.

COURSE GOALS

The student will:

Bloom's Level		Program Outcomes
3	1. Configure PC components including CPUs, motherboards, memory, storage devices, and peripherals (printers).	8
3	2. Demonstrate safe working practices and professional behavior when managing hardware and software systems.	2
3	3. Perform the steps to install, configure, and maintain different operating systems including Windows, macOS, and Linux.	8
3	4. Perform disk management operations including creating partitions, formatting drives, and implementing RAID solutions.	8
3	5. Configure network settings for wired and wireless connections, including SOHO (Small Office/Home Office) environments.	3
3	6. Apply security measures, including antivirus software, firewalls, encryption, and user account permissions to safeguard computer systems.	2
3	7. Use command-line utilities in Windows and Linux to manage files, processes, and system settings.	8
5	8. Troubleshoot hardware, software, and network issues using industry-standard tools and best practices.	4
6	9. Create system backups and perform system recovery using appropriate tools and methodologies.	5
6	10. Document system configurations, procedures, and troubleshooting steps to support IT governance and maintenance.	9
3	11. Implement virtualization using software tools to create, configure, and manage virtual machines for secure computing environments.	8
3	12. Implement endpoint protection measures, such as antivirus software and malware detection tools, to protect systems from security threats.	1
2	13. Explain the principles of cloud computing and how to configure client-side virtualization and cloud services.	7

3	14. Implement security best practices, including user authentication, permissions, encryption, and network access controls, to protect operating systems and data.	2

CORE VALUES

The Core Values are a set of principles that guide in creating educational programs and environments at Edison State. They include communication, ethics, critical thinking, human diversity, inquiry/respect for learning, and interpersonal skills/teamwork. The goals, objectives, and activities in this course will introduce/reinforce these Core Values whenever appropriate.

TOPIC OUTLINE

1. Introduction to PC Hardware and Components
2. Safety Practices and Professionalism in IT
3. Operating System Installation and Configuration (Windows, macOS, Linux)
4. BIOS/UEFI Settings and System Performance
5. Storage Devices and Disk Management (Partitions, RAID, Encryption)
6. Network Configuration and Troubleshooting (Wired, Wireless, SOHO)
7. Virtualization and Cloud Computing Fundamentals
8. File Systems and Data Management
9. Device Drivers and Peripheral Configuration
10. Security Best Practices (Antivirus, Firewalls, User Permissions)
11. Backup, Recovery, and Disaster Recovery Planning
12. Command-Line Utilities in Windows and Linux
13. Incident Response and Troubleshooting Methodologies
14. IT Documentation and Governance
15. CompTIA A+ Certification Exams (220-1201 & 220-1202)
16. Computer Usage Policy