

SYLLABUS
PART I
EDISON STATE COMMUNITY COLLEGE
CIS 235S HYBRID INFRASTRUCTURE II
3 CREDIT HOURS

COURSE DESCRIPTION

Continuation of hybrid infrastructure with an emphasis on system security, high availability, disaster recovery, system migration, monitoring, and troubleshooting. Prepares students for Microsoft's Configuring Windows Server Hybrid Advanced Services (AZ-801) certification exams. Prerequisite: CIS 234S with a grade of "C" or better.

COURSE GOALS

The student will:

Bloom's Level		Program Outcomes
3	1. Apply best practices and techniques to configure and secure server environments, protecting systems from unauthorized access and vulnerabilities.	3, 5, 6
5	2. Assess security policies and access controls to ensure the protection of directory services.	3, 5, 6
3	3. Implement secure configurations for server networking and storage, including encryption, firewall management, and secure file storage protocols.	3, 5, 6
5	4. Design high-availability solutions for critical server services using failover clustering and load balancing to minimize downtime.	3, 5, 6
3	5. Apply disaster recovery strategies, including backup, restore, and failover procedures, to ensure data protection and quick system recovery.	3, 5, 6
5	6. Evaluate migration strategies for moving on-premises servers and storage systems to cloud infrastructures.	3, 5, 6
4	7. Utilize monitoring tools and techniques to maintain performance and troubleshoot issues in server and virtual machine environments.	3, 5, 6

CORE VALUES

The core values are a set of principles that guide Edison State Community College in creating its educational programs and environment. They will be reflected in every aspect of the College. Students' educational experiences will incorporate the core values at all levels, so that a student who completes a degree program at Edison State Community College will not only have been introduced to each value, but will have had them reinforced and refined at every opportunity.

TOPIC OUTLINE

1. Server Hardening and Security
2. Directory Infrastructure Security
3. Server Networking and Storage Security
4. High Availability
5. Disaster Recovery
6. Servers and Storage Migration to the Cloud
7. Workload and Directory Migration to the Cloud
8. Server and Virtual Machine Monitoring and Troubleshooting
9. Directory and Networking Troubleshooting