CS 81.81A Course Outline as of Fall 2022

CATALOG INFORMATION

Dept and Nbr: CS 81.81A   Title: SERVER 1
Full Title: Server Administration 1
Last Reviewed: 2/22/2021

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	3.00	Lecture Scheduled	3.00	17.5	Lecture Scheduled	52.50
Minimum	3.00	Lab Scheduled	0	8	Lab Scheduled	0
		Contact DHR	0		Contact DHR	0
		Contact Total	3.00		Contact Total	52.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 105.00   Total Student Learning Hours: 157.50

Title 5 Category: AA Degree Applicable
Grading: Grade or P/NP
Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP
Also Listed As:
Formerly:

Catalog Description:
This course will provide a student with the knowledge and skills required to build, maintain, troubleshoot and support server hardware and software technologies. The student will be able to identify environmental issues; understand and comply with disaster recovery and physical/software security procedures; become familiar with industry terminology and concepts; understand server roles/specializations and interaction within the overall computing environment. It is also intended to serve the needs of individuals seeking to pass the CompTIA Server+ certification exam.

Prerequisites/Corequisites:

Recommended Preparation:
Eligibility for ENGL 100 or ESL 100 or appropriate placement based on AB705 mandates; and Completion of CS 80.11

Limits on Enrollment:

Schedule of Classes Information:
Description: This course will provide a student with the knowledge and skills required to build,

maintain, troubleshoot and support server hardware and software technologies. The student will be able to identify environmental issues; understand and comply with disaster recovery and physical/software security procedures; become familiar with industry terminology and concepts; understand server roles/specializations and interaction within the overall computing environment. It is also intended to serve the needs of individuals seeking to pass the CompTIA Server+ certification exam. (Grade or P/NP)

Prerequisites/Corequisites:
Recommended: Eligibility for ENGL 100 or ESL 100 or appropriate placement based on AB705 mandates; and Completion of CS 80.11
Limits on Enrollment:
Transfer Credit: CSU;
Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	**Area**		Effective:	Inactive:
CSU GE:	**Transfer Area**		Effective:	Inactive:
IGETC:	**Transfer Area**		Effective:	Inactive:
CSU Transfer:	Transferable	Effective: Fall 2021	Inactive:	
UC Transfer:		Effective:	Inactive:	

CID:

Certificate/Major Applicable:
Both Certificate and Major Applicable

COURSE CONTENT

Student Learning Outcomes:
At the conclusion of this course, the student should be able to:
1. Demonstrate knowledge in installation and maintenance of computer servers
2. Configure Domain Name System (DNS) and Dynamic Host Configuration Protocol (DHCP)
3. Develop procedures for securing computer servers through virtualization

Objectives:
At the conclusion of this course, the student should be able to:
1. Install, configure, and manage server hardware and server operating systems
2. Implement proper server hardening and security controls
3. Successfully troubleshoot common server problems
4. Demonstrate an understanding of key disaster recovery, high-availability, virtual machines, and backup concepts

Topics and Scope:

I. Installing and Configuring Servers
    A. Examining hardware environments
    B. Examining software environments
II.   Configuring Local Storage, File and Sharing Access

III. Configuring Print and Document Services
IV. Configuring Servers for Remote Management
V. Creating and Configuring Virtual Machine Settings and Storage
VI. Creating and Configuring Virtual Networks
VII. Configuring IPv4 and IPv6 Addressing
VIII. Deploying and Configuring the DHCP and DNS Service
IX. Troubleshooting Servers
X. Disaster Recovery
XI. Configuring Server Firewall
XII. Implement Server Hardening Solutions
XIII. Secure a Network Infrastructure

Assignment:

Reading assignments include:
1. Online research of cloud deployment and security practices
2. Approximately 50 pages weekly from the textbook

Homework problems include:
1. Weekly online discussion thread participation
2. Hands-on exercises and class performances to demonstrate proficiency with topics
3. Online quizzes (9 - 11)
4. Creation of assignments for managing and securing Windows servers

Other assignments include:
1. Skill demonstration examinations
2. Classroom scenario-based exercises

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Weekly written online discussions	Writing 5 - 10%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Homework problems, assignments for managing and securing Windows servers	Problem solving 15 - 30%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Class performances of Server configuration and skill demonstration examinations	Skill Demonstrations 20 - 30%

Exams: All forms of formal testing, other than skill performance exams.

Quizzes and skill demonstration examinations	Exams 20 - 30%

Other: Includes any assessment tools that do not logically fit into the above categories.

Attendance and participation in scenario-based exercises	Other Category 5 - 20%

Representative Textbooks and Materials:
Exam Ref 70-740 Installation, Storage and Compute with Windows Server 2016. Zacker, Craig. Pearson Press. 2017
Exam Ref 70-744 Securing Windows Server 2016. Warner, Timothy L. and Zacker, Craig. Pearson Press. 2016 (classic)
CompTIA Server+ Certification All-in-One Exam Guide (Exam SK0-004). Lachance, Daniel. McGraw-Hill Education. 2016 (classic)