Virginia Western Community College
ITN 257
Cloud Computing Infrastructure and Services

Prerequisites:

Course Description

This course focuses on the cloud infrastructure, deployment, security models, and key considerations in migrating to cloud computing. Conveys the technologies and processes required to build traditional, virtualized, and cloud data center environments, including computation, storage, networking, desktop and application virtualization, business continuity, security, management.

Semester Credits: 3　　Lecture Hours: 3　　　Course Lab/Clinical/Internship Hours: 0

Required Materials

Textbook: AWS Certified Cloud Practitioner, Sybex ISBN 978-1-119-49070-8

Other Required Material: Students will be provided comprehensive labs via internet.

Other Required Materials

Course Outcomes

At the completion of this course, the student should be able to:

1.　　　Cloud
1.1　　Define the value of the cloud
1.2　　Identify aspects of cloud economics
1.3　　List the different cloud architecture design principles
2.　　　Security
2.1　　Define the shared responsibility model of Cloud
2.2　　Define the Cloud security and compliance concepts
2.3　　Identify access management capabilities of cloud service providers
2.4　　Identify Resources for Cloud support
3.　　　Cloud Technology
3.1　　Define methods of deploying and operating the cloud
3.2　　Define the cloud global infrastructure
3.3　　Identify core services of cloud providers
3.4　　Identify resources for technology support
4.　　　Billing and Pricing
4.1　　Compare and contract various cloud service pricing models

4.2   Recognize the cloud service provider account structures with relation to billing and pricing

Topical Description

Week	Topic	Reference (Chapter)
1	Virtualization Concepts	NDG Labs
2	Virtual Machine Files and Snapshots	NDG Labs
3	Cloud Introduction	Ch 1
4	Cloud Account Management	Ch 2
5	Cloud Support (AWS)	Ch 3
6	Understanding the cloud environment	Ch 4
7	Securing virtual resources	Ch 5 Ch 6
8	Core Compute Services	Ch 7
9	Core Storage Services	Ch 8
10	Core Database Services	Ch 9
11	Core Network Services	Ch 10
12	Automating AWS Workloads	Ch 11
13	Connecting MySQL RDS Instance	AWS
14	Security Groups and Access Web Server Comprehensive Lab	AWS
15	AWS Cloud Practitioner Exam 1	
16	Individual Exam and Labs	

Notes to Instructors

Requires alignment with AWS Academy for Lessons and Lab Exercises.

https://www.awsacademy.com/

Instructors will need to register as instructor and also register each student.