SPRINGFIELD TECHNICAL COMMUNITY COLLEGE

ACADEMIC AFFAIRS

Course Number: CSE-254   Class/Lect. Hours: 3   Lab Hours: 3   Credits: 4   Dept.: CSET

Course Title: Cloud Computing Infrastructure and Services   Semester: Fall   Year: 2015

Course Description, Prerequisite, Corequisite:

This class provides the student with the wide spectrum of topics starting from Classic Data Center to IT-as-a-Service. Topics include cloud deployment and service models, cloud infrastructure, private clouds, public clouds, security, and the key considerations in migrating to cloud computing. The course provides the required technology essentials across all domains—including server, storage, RAID, storage area networks (SAN), networking, applications, and databases—to help develop a strong understanding of service virtualization and cloud computing technologies.

Prerequisite(s): CSE-110 and CSO-105 or permission of the instructor.

Corequisite(s): CSE-254L

Course Objectives	Competencies
Understand the business case for cloud computing.	Describe the business case for using cloud computing. Describe the classic model for IT data centers. Describe the Software as a Service (SAS) and cloud computing models. List the key considerations for moving to a cloud architecture. Explain the key characteristics, services and deployment models for the Cloud computing.
Understand the basic storage models and server virtualization.	Describe basic block and file level storage systems. Describe network based file storage using SAN and NAS devices. Describe business continuity solutions in a VDC environment. Decsribe backup and recovery methods. Describe data replication and deduplication. Describe virtualization support for cloud infrastructuires.
Understand private and public clouds.	Describe the difference between a public and private cloud. Describe and use the resources in a public cloud. Describe the Cloud infrastructure components and service management processes. Create a private cloud using Windows or Linux servers.