

**J. Sargeant Reynolds Community College  
Course Content Summary**

**Course Prefix and Number:** ITN 257

**Credits:** 3

**Course Title:** Cloud Computing: Infrastructure and Services

**Course Description:** Focuses on cloud infrastructure, deployment, security models, and the key considerations in migrating to cloud computing. Covers 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, and management. Prerequisite: ITN 101 or school approval. Lecture 3 hours per week.

**General Course Purpose:** This course provides a comprehensive foundation in cloud computing concepts and technologies. Students will learn the fundamentals of cloud computing using Amazon Web Services and Microsoft Azure.

**Course Prerequisites and Co-requisites:**

**Prerequisite:** ITN 101 or school approval

**Student Learning Outcomes:**

Upon completing the course, the student will be able to

- a. Describe the importance and benefits of cloud computing;
- b. Explain roadmap for transformation from classic to cloud environment;
- c. Explain virtualization requirements associated with IT infrastructure;
- d. Identify business continuity planning in a cloud environment;
- e. Describe effective cloud computing deployment models for organizations; and
- f. Articulate security concerns commonly found in cloud computing environments.

**Major Topics to Be Included:**

- a. Cloud Computing Benefits
- b. Classic Data Center vs. Cloud Computing Environment
- c. Classic and Virtualized Data Center Components
- d. Cloud Computing Requirements and Tools
- e. Business Continuity Planning in a Cloud Environment
- f. Effective Cloud Computing Deployment Models for Businesses/IT Organizations
- g. Infrastructure and Service Management Activities in Cloud Computing
- h. Security in Cloud Computing Environments
- i. Cloud Products and Services
- j. Cloud Computing Environment Security Analysis

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