

Administrative Master Syllabus

Course Information

Course Title	Fundamentals of Cloud Computing
Course Prefix, Num. and Title	ITNW 1309 - Fundamentals of Cloud Computing
Division	Technology and Business
Department	Information Technology and Networking
Course Type	WECM Course
Course Catalog Description	Introduction to Cloud computing from a business and technical perspective, including cloud concepts, services, architecture, system integration, connectivity, data center migration, administration, security, compliance and technical support. Coverage includes preparation for industry certifications. Topics may adapt to changes in industry practices.
Pre-Requisites	None
Co-Requisites	None

Semester Credit Hours

Total Semester Credit Hours (SCH): Lecture Hours:	3:2:2
Lab/Other Hours	
Equated Pay Hours	3
Lab/Other Hours Breakdown: Lab Hours	2
Lab/Other Hours Breakdown: Clinical Hours	0
Lab/Other Hours Breakdown: Practicum Hours	0
Other Hours Breakdown	0

Approval Signatures

Title	Signature	Date
Department Head:	Muna Saqer, Comp Sci and IT&N Program Director	11-16-2023
Division Chair:	David Kucera, Technology & Business Division	11-16-2023
VPI:		

Additional Course Information

Topical Outline: Each offering of this course must include the following topics (be sure to include information regarding lab, practicum, and clinical or other non-lecture instruction).

- What is cloud computing
- Why do we need cloud computing
- Understanding cloud computing
- Fundamental concepts and models of cloud computing
- Cloud-enable technology
- Cloud Security Fundamentals
- Cloud Infrastructure Mechanisms
- Specialized Cloud Mechanisms
- Cloud Management Mechanisms
- Cloud Security Mechanisms
- Fundamental Cloud Architectures
- Advanced Cloud Architectures
- Specialized Cloud Architectures
- Cloud Delivery Model
- Cost Metrics and Pricing models for cloud computing
- Service Quality Metrics with dealing with cloud computing

Course Learning Outcomes:

Learning Outcomes – Upon successful completion of this course, students will:

- Explain the essential characteristics of Cloud services, including: on-demand self-service, broad network
- Describe cloud deployment and service models
- Describe the organizational capabilities and implications for the successful adoption of cloud computing
- Describe cloud infrastructure and enabling technologies
- Create, manage, and scale a virtual server in a cloud environment
- Describe maintenance operations and security in the cloud
- Identify business drivers for cloud computing

Methods of Assessment:

Individual/Group Assignments
Individual/Group Projects
Reading Assignments
Presentations
Lab Works/Assignments
Quizzes/Tests/Exams

Required text(s), optional text(s) and/or materials to be supplied by the student:

Cloud Computing: Concepts, Technology, and Architecture, Thomas Erl, Publisher: Prentice Hall. (Latest edition)
CompTIA Cloud+ Study Guide: Exam CV0-003 (Sybex Study Guide). Ben Piper. Publisher: WILEY (Third or latest edition)

Suggested Course Maximum:

18



List any specific or physical requirements beyond a typical classroom required to teach the course.

- Instructor’s pc needs 2 monitors, 2 NICs (one to connect to student network and one to connect to WCJC network & Data Projection system projector)
- Computer with dual or quad core 64-bit processor, 16 GB RAM, 1 TB or larger hard drive, graphics card, and monitor for each student running Windows 10 or current version of operating system for each student and the instructor
- Microsoft Office current version licensed for each student and instructor
- Antivirus software for each student and instructor
- Laser Printer

Course Requirements/Grading System: Describe any course specific requirements such as research papers or reading assignments and the generalized grading format for the course.

Attendance and Housekeeping.....0-5%
 Homework.....10-25%
 Labs25-40%
 Tests and Final Exam.....45-50%

Grade System:
 90-100% =A
 80-89% =B
 70-79% =C
 60-69% =D
 Below 60%.... =F

Curriculum Checklist:

- Administrative General Education Course** (from ACGM, but not in WCJC Core) – No additional documents needed.
- Administrative WCJC Core Course.** Attach the Core Curriculum Review Forms
 - Critical Thinking
 - Communication
 - Empirical & Quantitative Skills
 - Teamwork
 - Social Responsibility
 - Personal Responsibility
- WECM Course** -If needed, revise the Program SCANS Matrix and Competencies Checklist