THE UNIVERSITY OF TEXAS AT DALLAS

Syllabus – MIS 6363.501

Cloud Computing Fundamentals

Jindal School of Management

The University of Texas at Dallas

Professor Mohmmad El-zaghah

Professor Information

Email Address: **mohammad.el-zaghah@utdallas.edu**

Meeting Location: **JSOM 2.106**

Schedule Wednesday at 7:00 pm – 9:45 pm

TA Information TBD

Course Modality and Expectations

Instructional Mode	Traditional learning modality (face-to-face)
Course Platform	Blackboard, MS Teams
Expectations	• **Class Attendance (face-to-face) is mandatory for all students.** • **Lectures will NOT be recorded.**

Course Description

MIS 6363 - Cloud Computing Fundamentals (3 semester credit hours) This course is designed as a primer for cloud computing which many believe is the third major wave of computing, after mainframe and client-server computing. The course examines this technology from a business perspective. The course is designed to deliver a holistic and balanced view of business model, technological infrastructure, and security issues of cloud computing useful for the technology student to understand the business challenges and the business student to understand the technology challenges.

Course Objectives

Curriculum objectives Upon completion of this course, students will be able to do the following:

- Define Computing Cloud
- Explain pricing philosophy
- Identify the global infrastructure components
- Describe the security and compliance measures of the Cloud
- Create a virtual private cloud (VPC)
- Differentiate between Amazon Simple Storage Service (Amazon S3), Amazon Elastic Block Store (Amazon EBS), Amazon Elastic File System (Amazon EFS), and Amazon Simple Storage Service Glacier (Amazon S3 Glacier)
- Demonstrate when to use AWS database services, including Amazon Relational Database Service (Amazon RDS), Amazon DynamoDB, Amazon Redshift, and Amazon Aurora
- Explain the architectural principles of the AWS Cloud
- Explore key concepts related to Elastic Load Balancing, Amazon CloudWatch, and Amazon EC2 Auto Scaling

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Academic Calendar

Wk	Class Date	Module	Learning Objectives	Assign.
1	01/18/2023	Course Introduction	Productivity Syllabus Overview Course objectives and overview	1- Review Syllabus 2- Set up AWS accounts 3- Attendance Quiz#1
2	01/25/2023	Module 1:	Cloud Concepts Overview • Intro to cloud computing • Advantages of the Cloud • Intro to AWS • Moving to the AWS Cloud	1- Knowledge Check #1 2- Attendance Quiz #2
3	02/01/2023	Module 2:	Cloud Economics and Billing • Fundamentals of pricing • Total Cost of Ownership • AWS Organizations • Billing & Cost Management	**1- Introduction to Group Project** 2- Knowledge Check #2 **3-** Attendance Quiz #3
4	02/08/2023	Module 3:	AWS Global Infrastructure Overview • AWS Global Infrastructure • AWS Services & Service Categories	1- Knowledge Check #3 2- Attendance Quiz #4
5	02/15/2023	Module 4:	AWS Cloud Security • AWS Shared Responsibility Model • AWS IAM • Securing a new AWS Account • Securing Data • Working to Ensure Compliance	**1-** Knowledge Check #4 **2-** Attendance Quiz #5 **3-** Lab 1 **4- Project status and discussion**
6	02/22/2023	Module 5:	Network and Content Delivery • Networking Basics • Amazon VPC • VPC networking • VPC Security • Route 53 • CloudFront	1- Knowledge Check #5 2- Attendance Quiz #6 3- Lab 2
7	03/01/2023	Midterm Exam Review		1- Attendance Quiz #7
8	03/08/2023	Midterm Exam at Testing Center		
9	03/15/2023	Spring Break (No Class this week)		
10	03/22/2023	Module 6:	Compute • EC2 • Container Services • AWS Lambda • AWS Elastic Beanstalk	1- Knowledge Check #6 2- Attendance Quiz #8 3- Lab 3
11	03/29/2023	Module 7:	Storage • EBS • AWS S3 • AWS EFS • AWS S3 Glacier	1- Knowledge Check #7 2- Attendance Quiz #9 3- Lab 4
12	04/05/2023	Module 8:	Databases • Amazon RDS • Amazon DynamoDB • Amazon Redshift • Amazon Aurora	1- Knowledge Check #8 2- Attendance Quiz #10 3- Lab 5
13	04/12/2023	Module 9:	Cloud Architecture • AWS Well Architected Framework • Operational Excellence • Security • Reliability • Performance Efficiency • Cost Optimization • High Availability • AWS Trusted Advisor	1- Knowledge Check #9 2- Attendance Quiz #11
14	04/19/2023	Module 10:	Auto Scaling & Monitoring • Elastic Load Balancing • Amazon CloudWatch • Amazon EC2 Auto Scaling	1- Knowledge Check #10 2- Attendance Quiz #12 3- Lab 6
15	04/26/2023	Project Presentations		1- Attendance Quiz #13 2- Group Project
16	05/03/2023	Final Exam Review		1- Attendance Quiz #14
17	05/10/2023	Final Exam at Testing Center or AWS Certified Cloud Practitioner Exam		

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Grading scale

Top 30% students	A
Next 30% students	A-
Next 30% students	B+
Remaining 10% students	B and below

Calculated Grade Weights**

Labs (total of 6)	20%
Knowledge checks (total of 10)	20%
Midterm Exam	20%
Final Exam / AWS Cloud Practitioner Cert.	20%
Group project	15%
Attendance	5%
Total	100%

***The assignments and calculated grade weights are subject to change at the discretion of the Professor.*

Course Policies

- The Homework-Labs are to be completed in class and are due by the end of class, unless otherwise stated in eLearning.
- Makeup Exam: There is no makeup exams. In case of medical emergency, a medical report is required including physician information.
- Missing exam: Any missing exam without medical report will be graded as Zero.
- Assignments must be submitted through eLearning. Emailed submissions are not accepted.
- Late Assignments: Subject to 10% penalty, 20% penalty after the third day.
- Class Attendance: Students who fail to attend class regularly are inviting scholastic difficulty. Absences may lower a student's grade where class attendance and class participation are deemed essential by the instructor.
- UTD Syllabus Policies and Procedures: Please visit https://go.utdallas.edu/syllabus-policies
- Cheating will not be tolerated. When I find evidence of cheating, the documentation is turned over to the Office of Community Standards and Conduct. (https://www.utdallas.edu/conduct/dishonesty/)

Academic Integrity:

In general, academic dishonesty involves the abuse and misuse of information or people to gain an undeserved academic advantage or evaluation. The common forms of academic dishonesty include:

- Cheating – using deception in the taking of tests or the preparation of written work, using unauthorized materials, copying another person's work with or without consent, or assisting another in such activities.
- Lying – falsifying, fabricating, or forging information in either written, spoken, or video presentations.
- Plagiarism—using the published writings, data, interpretations, or ideas of another without proper documentation

  Plagiarism includes copying and pasting material from the internet into assignments without properly citing the source of the material. Episodes of academic dishonesty are reported to the Vice President for Academic Affairs. The potential penalty for academic dishonesty includes a failing grade on a particular assignment, a failing grade for the entire course, or charges against the student with the appropriate disciplinary body.

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COVID-19 Guidelines and Resources

The information contained in the following link lists the University's COVID-19 resources for students and instructors of record. Please see http://go.utdallas.edu/syllabus-policies.

Class Participation

Regular class participation is expected regardless of course modality. Students who fail to participate in class regularly are inviting scholastic difficulty. A portion of the grade for this course is directly tied to your participation in this class. It also includes engaging in group or other activities during class that solicit your feedback on homework assignments, readings, or materials covered in the lectures (and/or labs). Class participation is documented by faculty. Successful participation is defined as consistently adhering to University requirements, as presented in this syllabus. Failure to comply with these University requirements is a violation of the Student Code of Conduct.

Class Recordings

Students are expected to follow appropriate University policies and maintain the security of passwords used to access recorded lectures. Unless the Office of Student AccessAbility has approved the student to record the instruction, students are expressly prohibited from recording any part of this course. Recordings may not be published, reproduced, or shared with those not in the class, or uploaded to other online environments except to implement an approved Office of Student AccessAbility accommodation. Failure to comply with these University requirements is a violation of the Student Code of Conduct.

NOTE: if the instructor records any part of the course, then the instructor will need to use the following syllabus statement:

The instructor may record meetings of this course. Any recordings will be available to all students registered for this class as they are intended to supplement the classroom experience. Students are expected to follow appropriate University policies and maintain the security of passwords used to access recorded lectures. Unless the Office of Student Access Ability has approved the student to record the instruction, students are expressly prohibited from recording any part of this course. Recordings may not be published, reproduced, or shared with those not in the class, or uploaded to other online environments except to implement an approved Office of Student Access Ability accommodation. If the instructor or a UTD school/department/office plans any other uses for the recordings, consent of the students identifiable in the recordings is required prior to such use unless an exception is allowed by law. Failure to comply with these University requirements is a violation of the Student Code of Conduct.

Class Materials

The Instructor may provide class materials that will be made available to all students registered for this class as they are intended to supplement the classroom experience. These materials may be downloaded during the course, however, these materials are for registered students' use only. Classroom materials may not be reproduced or shared with those not in class, or uploaded to other online environments except to implement an approved Office of Student Access Ability accommodation. Failure to comply with these University requirements is a violation of the Student Code of Conduct.

Communication

This course utilizes online tools for interaction and communication. Some external communication tools such as regular email and a web conferencing tool may also be used during the semester. For more details, please visit the Student eLearning Tutorials webpage for video demonstrations on eLearning tools. Student emails and discussion board messages will be answered within 3 working days under normal circumstances.

Distance Learning Student Resources

Online students have access to resources including the McDermott Library, Academic Advising, The Office of Student Access Ability, and many others. Please see the eLearning Current Students webpage for more information.

Server Unavailability or Other Technical Difficulties

The University is committed to providing a reliable learning management system to all users. However, in the event of any unexpected server outage or any unusual technical difficulty which prevents students from completing a time sensitive assessment activity, the instructor will provide an appropriate accommodation based on the situation. Students should immediately report any problems to the instructor and also contact the online eLearning Help Desk. The instructor and the eLearning Help Desk will work with the student to resolve any issues at the earliest possible time.

UT Dallas Syllabus Policies and Procedures

- The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus.
- Please go to https://go.utdallas.edu/syllabus-policies for these policies.

Academic Support Resources

- The information contained in the following link lists the University's academic support resources for all students.
- Please see http://go.utdallas.edu/academic-support-resources.

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.