Course Information

Course Number/Section	MIS 6363-0W1 -Online
Course Title	Cloud Computing Fundamentals
Term	Spring 2023

Professor Contact Information

Professor	Engin Calisir
Office Phone	(972) 883-4303
Email Address	ecalisir@utdallas.edu
Office Location	JSOM 2.313
Online Office Hours	Mondays between 1:00pm to 4:00pm by appointment

https://outlook.office365.com/owa/calendar/EnginCalisirOfficeHours@utdallas.edu/bookings/

Note: *state time/day and how office hours will be held, e.g., BlackBoard Collaborate or MS Teams (add appropriate links) and/or phone call – optional; please ensure student's identity in adherence to FERPA*

Course Pre-requisites, Co-requisites, and/or Other Restrictions

There is no Prerequisite for this class.

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 the 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. (3-0) R

Student Learning Objectives/Outcomes

Completing this course will provide a good understanding of cloud computing, virtualization and their fundamental technologies, architecture, and security. I will be providing a solid foundation for business-related cloud-computing needs.

After successfully finishing this class, you should be able to:

- Provide the appropriate cloud computing requirements for business
- Understand terms and methodologies every student will need to navigate the cloud
- Identify the architecture and infrastructure of cloud computing, including SaaS, PaaS, IaaS, public cloud, private cloud, and hybrid cloud.
- Explain the core issues of cloud computing such as security, privacy, and interoperability
- Ability to implement, deliver and maintain cloud technology and infrastructure

Required Textbooks and Materials

Required Materials

Course materials will be available on e-learning. Please read all the assigned course materials before class time

Suggested Course Materials (not Required)

Suggested Readings/Texts

1. Cloud Computing :(The MIT Press Essential Knowledge Series): The MIT Press Essential Knowledge Series Paperback – May 13, 2016 by Nayan B. Ruparelia ,Ralph Retter, Walter Schupeck , Peter Arbitter
2. The basics of cloud computing: understanding the fundamentals of cloud computing in theory and practice: Rountree, Derrick. ; Castrillo, Ileana. ; Jiang, Hai
3. Cloud Governance and Management Made Simple –Lita Fulton
4. Learning Docker : Second Edition Jeeva S. Chelladhuai , Vinod Singh, Pethuru Raj
5. Additional course materials will be available on e-learning. Please read all the assigned course materials before the class time.

Textbooks and some other bookstore materials can be ordered online or purchased at the UT Dallas Bookstore.

Technical Requirements

In addition to a confident level of computer and Internet literacy, certain minimum technical requirements must be met to enable a successful learning experience. Please review the important technical requirements on the Getting Started with eLearning webpage.

Course Access and Navigation

This course can be accessed using your UT Dallas NetID account on the eLearning website.

Please see the course access and navigation section of the Getting Started with eLearning webpage for more information.

To become familiar with the eLearning tool, please see the Student eLearning Tutorials webpage.

UT Dallas provides eLearning technical support 24 hours a day, 7 days a week. The eLearning Support Center includes a toll-free telephone number for immediate assistance (1-866-588-3192), email request service, and an online chat service.

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 AccessAbility, 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.

Academic Calendar

WEEK/ DATES	TOPIC/LECTURE	READING	ASSESSMENT / ACTIVITY	DUE DATE
1 Jan17 to Jan22	Virtualization Essentials	VMware Virtualization		
2 Jan22 to Jan29	Software Defined Architecture (SDDC, SDN, SDS)	VMware SDDC Whitepaper		
3 Jan30 to Feb5	Cloud Computing Actors and Essentials Characteristics	NIST-800-145 NIST-SP500-292		
4 Feb6 to Feb12	Cloud Models AWS Global Infrastructure Quiz 1 (week 1-4)	21-AWS Overview	Lab0a-AWS-Management Console &Global infrastructure	
5 -6 Feb13 to Feb26	Cloud Networking Amazon CloudFront	IPv4 Addressing and Subnetting Paper 40.VPC paper	Lab0b : Billing Alerts and SNS (for Free-Tier) Lab5 : Virtual Private Cloud VPC)	

WEEK/ DATES	TOPIC/LECTURE	READING	ASSESSMENT / ACTIVITY	DUE DATE
7-8 Feb27 to Mar6	Cloud-Based Storages EBs, EFS, S3 Disaster Recovery	12-AWS-S3-FAQs	Lab1:AWS Storage Practices (S3, EBS, EFS ,Glacier)	
9 Mar13 to Mar19	Spring Break Have Fun			
10 Mar20 to Mar26	Cloud-Based Compute	8-AWS EC2 FAQs	Lab2: AWS Virtual Machines (EC2,AMIs)	Due: Lab1 and 5
11 Mar27 to Apr2	Cloud-Based Compute Quiz 2 (week 5-11)	7-Aws-Ec2 Auto scaling FAQs		
12 Apr3 to Apr9	Cloud-based Databases RDS- NoSQL	10-AWS-RDS-FAQs	Lab3 and 4: AWS Database Practices (RDS, SQL Server, DynamoDB)	Due: Lab2
13 Apr10 Apr16	Identity and Access Management (IAM)	30.AWS-AIM	Lab6: Introduction to AWS Identity and Access Management (IAM)	Due: Lab3 and 4
14 Apr17 Apr23	Cloud Security Quiz 3 (week 12-14)		Lab7 :Hosting a Static Website Using Amazon Simple Storage Service (Amazon S3)	Due: Lab6
15 Apr24 May1	Cloud Architecture	1.AWS Well Architecture Framework 20.AWS Cloud Adaptations Framework		Due: Lab7

WEEK/ DATES	TOPIC/LECTURE	READING	ASSESSMENT / ACTIVITY	DUE DATE
16 Exam week	**Final Exam 1-15** Comprehensive			

Proctored Final Exam Procedures
If your course has a proctored exam requirement, please see the UTD Testing Center webpage and Distance Learning Proctored Exams webpage to make arrangements.

Exam Proctoring: an online remote proctoring tool will be available for fully online courses at the discretion of the professor. Fully online courses may use remote proctoring software for exams in which a webcam scan of the testing area and the recording of all activity during the exam is required.

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 AccessAbility accommodation. Failure to comply with these University requirements is a violation of the Student Code of Conduct.

Class Participation

Regular class participation is expected. 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 add the following syllabus statement:

The instructor may record meetings of this course. These recordings will be made available to all students registered for this class if the intent is to supplement the classroom experience. 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.

Grading Policy

Final Exam:	40 points
Quiz (13 each)	39 points
Labs(3 points each)	21 points
Total	100

Course Policies

Make-up exams

There will be no make up exam

Extra Credit

If you pass the AWS practitioner exam until May 16th and send me your certificate number, I can add extra 10 points top of your final grade.

Late Work

Late Works will not be accepted

Special Assignments

Classroom Citizenship

Comet Creed

This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:

"As a Comet, I pledge honesty, integrity, and service in all that I do."

Academic Support Resources

The information contained in the following link lists the University's academic support resources for all students.

Please go to Academic Support Resources webpage for these policies.

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 review the catalog sections regarding the credit/no credit or pass/fail grading option and withdrawal from class.

Please go to UT Dallas Syllabus Policies webpage for these policies.

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