

COSC 40233 Cloud Computing

Fall 20XX

Course Information

Instructor Information

Course Description: This is an introductory course on Cloud Computing. The course will provide a detailed overview and help students get an overall understanding of cloud computing concepts. More specifically, students will get hands-on exposure to the AWS cloud, including but not limited to the AWS core services, security, and architecture.

Prerequisite: CITE 30103 and completed 18 hours in the major.

Textbook: *Cloud Computing Solutions Architect: A Hands-On Approach (Required)*

Author: Arshdeep Bahga, Vijay Madisetti; **ISBN:** 978-0996025591

Grade Distribution:

Mid-term Exam	20%	Final Exam	20%	Project 1	20%
Project 2	20%	Project 3	20%		

Letter Grade Distribution:

>= 93.00	A	87.00 - 89.99	B+	77.00 - 79.99	C+	67.00 - 69.99	D+
90.00 - 92.99	A-	83.00 - 86.99	B	73.00 - 76.99	C	63.00 - 66.99	D
<= 59.99	F	80.00 - 82.99	B-	70.00 - 72.99	C-	60.00 - 62.99	D-

- Numerical grades will be rounded to the nearest hundredth.

Important Dates

- Last Day to Drop: November 03
- P/NC Date: December 01
- Final Exam: Tuesday, December 09, 17:30 -- 18:50

Course Learning Outcomes: Upon the successful completion of this course, students will be able to:

- Understand core concepts such as cloud principles, cloud networking and storage, cloud needs assessment, cloud vendors, risk, compliance, and security in the cloud.

2. Describe the key terminologies, fundamental concepts, service models, and deployment models that define the cloud computing paradigm.
3. Analyze the technologies and architectures that provide the foundation for cloud computing.
4. Examine basic and advanced cloud computing design patterns and architectures.
5. Use performance and cost metrics, as well as pricing models, to make decisions related to cloud adoption and management.
6. Investigate the economic, security, and productivity justifications and issues involved in moving to cloud computing.

Course Schedule and Topic (Subject to Change):

WEEK	DATES	TOPIC	COMMENTS
1	08/19	Chapter 1: Introduction to Cloud Computing	
	08/21	Chapter 1: Introduction to Cloud Computing	
2	08/26	Chapter 2: Virtual Machines and Compute Services	
	08/28	Chapter 2: Virtual Machines and Compute Services	
3	09/02	Chapter 3: Cloud Application Development	
	09/04	Chapter 3: Cloud Application Development	
4	09/09	Chapter 4: Serverless Applications	
	09/11	Chapter 4: Serverless Applications/AWS Demo	
5	09/16	PROJECT 1	
	09/18	Chapter 5: Cloud Storage	
6	09/23	Chapter 5: Cloud Storage	
	09/25	Chapter 6: Relational (SQL) Databases	
7	09/30	Chapter 6: Relational (SQL) Databases/Exam Review	
	10/02	MID-TERM EXAM	
8	10/07	Chapter 7: NoSQL Databases	
	10/09		Fall Break
9	10/14	Chapter 7: NoSQL Databases/AWS Demo	
	10/16	PROJECT 2	
10	10/21	Chapter 8: Big Data Analytics in the Cloud	
	10/23	Chapter 8: Big Data Analytics in the Cloud	
11	10/28	Chapter 9: Queues and Connectors	
	10/30	Chapter 9: Queues and Connectors	

12	11/04	Chapter 10: Batch Analytics	
	11/06	Chapter 10: Batch Analytics	
13	11/11	PROJECT 3	
	11/13	Chapter 11: Real-time Analytics	
14	11/18	Chapter 12: Cloud App Monitoring and Benchmarking	
	11/20	Chapter 13: Cloud Security	
15	11/25		Thanksgiving Day
	11/27		Thanksgiving Day
16	12/02	REVIEW	
	12/04		Study Day (No Class)
17	12/09	FINAL EXAM	

Grading Errors: Requests for re-evaluation of points on exams, and labs must be returned to the instructor within one week, and accompanied by a brief written description of the grading error you believe was made. After this time, grades are final. Re-evaluations will not be done in the classroom, before, during or after class. Resubmission for re-evaluation subjects the entire assignment for review. This means that if an error was made in your favor, you may lose points when re-submitting.

Make Up Exams: Make up exams will be given only for absences discussed with the instructor prior to the exam. If no arrangements are made, your grade will be a ZERO.

Late Work Policy: All scheduled assignments will need to be submitted by the due time. For each day your assignment is late, including weekend and holidays, 15% will be deducted from your score. Assignments that are late more than TWO days will NOT be accepted (except for Official University Absences or medical reasons).

Attendance and Participation: Class attendance as well as participation could have an impact on your final grade. You are expected to engage synchronously at the time designated in the course schedule, i.e., Central Standard Time zone (Horned Frog Time) as it translates to where you are located. You will be held responsible for all material presented in class. If you choose to miss a class, you should be aware that this could adversely affect your performance on tests. It is your responsibility to obtain all materials missed and to make up all lectures, discussions, and etc. without the aid of the instructor.

Formal attendance will not be taken. As the semester progresses, I will begin to recognize students attending (or not attending) lecture. In addition to simply being in class, you should come prepared to ask questions about the material being covered that day. Your participation in the course will involve the following forms of activity:

- Attending the lectures.
- Reading the textbook(s) and other assigned materials.
- Completing the projects.

- Taking the exams.

Disabilities Statement: Student Access and Accommodation: Texas Christian University affords students with disabilities reasonable accommodations in accordance with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act. To be eligible for disability-related academic accommodations, students are required to register with the TCU Office of Student Access and Accommodation and have their requested accommodations evaluated. If approved for accommodations, students are required to discuss their official TCU Notification of Accommodation with their instructors. Accommodations are not retroactive and require advance notice to implement. The Office of Student Access and Accommodation is located in The

Harrison, Suite 1200. More information on how to apply for accommodations can be found at <https://www.tcu.edu/access-accommodation/> or by calling Student Access and Accommodation at (817) 257-6567.

Note(s): Course syllabi are intended to provide students with basic information concerning the course. The syllabus can be viewed as a “blueprint” for the course; changes in the syllabus can be made and students will be informed of any substantive changes concerning examination, the grading or attendance policies and changes in project assignments.