



Course Specifications

Institution:	Majmaah University.
Academic Department :	College of Science at AzZulfi.
Programme:	Computer Science and Information
Course :	Cloud Computing(CSI-533)
Course Coordinator :	Mr. ISSA Al-Smadi
Programme Coordinator :	DR.YOSRY AZAAM
Course Specification Approved Date :	23/ 12 / 1435 H



A. Course Identification and General Information

1 - Course title :	Cloud Computing	Course Code: (CSI-533)	
2. Credit hours :	(2 lecture + 2 Laboratory)		
3 - Program(s) in which the course is offered:	Computer Science and Information Program		
4 – Course Language :	ENGLISH		
5 - Name of faculty member responsible for the course:	ISSA ALSMADI		
6 - Level/year at which this course is offered :	Elective		
7 - Pre-requisites for this course (if any) :	<ul style="list-style-type: none"> • Computer Networks CSI 322 • Design & Analysis of Algorithms CSI 321. 		
8 - Co-requisites for this course (if any) :	N/A		
9 - Location if not on main campus:	College of Science at AzZulfi		
10 - Mode of Instruction (mark all that apply)			
A - Traditional classroom	<input checked="" type="checkbox"/>	What percentage? <table border="1"><tr><td>80 %</td></tr></table>	80 %
80 %			
B - Blended (traditional and online)	<input checked="" type="checkbox"/>	What percentage? <table border="1"><tr><td>5 %</td></tr></table>	5 %
5 %			
D - e-learning	<input type="checkbox"/>	What percentage? <table border="1"><tr><td>5 %</td></tr></table>	5 %
5 %			
E - Correspondence	<input type="checkbox"/>	What percentage? <table border="1"><tr><td>..... %</td></tr></table> %
..... %			
F - Other	<input checked="" type="checkbox"/>	What percentage? <table border="1"><tr><td>10 %</td></tr></table>	10 %
10 %			
Comments :	<p>One-tenth of the course is presented mainly inside video lectures of other instructors worldwide. They illustrate the same topics that I introduced in my lectures with a different presentation.</p>		

B. Objectives

What is the main purpose for this course?

The goal of this course is to introduce the students to the principles, foundations, and applications of cloud computing, and the way it presents significant technology trends to reshape information technology processes and the IT marketplace. In this course the different types of features, standards, services, and security issues in cloud computing will be discussed. This course offers students the opportunity to study this new paradigm of computing in which dynamically scalable and often virtualized resources are offered as services over the internet. The course will also cover some of the autonomic computing aspects which provide solutions to the challenges of cloud management.





Students will have the opportunity to study both theoretical and experimental aspects of the cloud computing. The class requires engagement in active participation through presentations and many discussions. A variety of reading material will be given throughout the semester. Students inclined to both theoretical and/or experimental work are expected to bring their active contribution to this class.

Briefly describe any plans for developing and improving the course that are being implemented :

1. Using group discussion.
2. Updating the materials of the course to cover the new topics of the field.

C. Course Description

1. Topics to be Covered

List of Topics	No. of Weeks	Contact Hours
1. Overview of Distributed Computing: Trends of computing, Introduction to distributed computing.	1	4
2. Introduction to Cloud Computing : What's cloud computing, Properties & Characteristics , Service models , Deployment models.	2	8
3. Infrastructure as a Service (IaaS) : Introduction to IaaS ,Resource Virtualization, Server ,Storage ,Network, Case studies.	2	8
4. Platform as a Service (PaaS) : Introduction to PaaS, Cloud platform & Management ,Computation ,Storage, Case studies.	2	8
5. Software as a Service (SaaS) : Introduction to SaaS, Web services Web 2.0, Web OS ,Case studies.	1	4
6. Cloud issues and challenges : Cloud provider Lock-in ,Security.	2	8
7. Overview of Map Reduce: What is Map Reduce, What is Map Reduce used for, implementation detail ,implication for the parallel development.	2	8
8. Introduction to Hadoop : Typical Hadoop Cluster , Challenges , Hadoop Components, example.	1	4
9. Hadoop Distributed File System : Big data and hand hop introduction,Hdfs introduction,Hdfs definition, Hdfs architecture,understanding the file system, Read and write in Hdfs, Hdfs cl.	2	8





2. Course components (total contact hours and credits per semester):

	Lecture	Tutorial	Laboratory	Practical	Other:	Total
Contact Hours	30	30	-	-	-	60
Credit	30	15	-	-	-	45

3. Additional private study/learning hours expected for students per week.

5 Hours

The total workload of the student in this course is then: $60 + 5 * 15 = 135$ work hours.

4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy

	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	Knowledge		
1.1	Demonstrate the knowledge of architecture, service models, economics, scaling and recovering of cloud computing.	Lectures. Lab demonstrations.	Written Exam Homework assignments
1.2	Understand the core concepts of the cloud computing paradigm: how and why this paradigm shift came about and the influence of several enabling technologies in cloud computing.	Case studies. Individual presentations.	Lab assignments Class Activities Quizzes
1.3	Understand the technology infrastructure and network requirements for cloud computing.		
1.4	Understand the legal, ethical, and managerial requirements of cloud computing.		
2.0	Cognitive Skills		
2.1	Choose the appropriate technologies, algorithms, and approaches for the related issues.	Lectures. Lab demonstrations.	Written Exam Homework assignments
2.2	Identify problems, analyze, and evaluate various cloud computing solutions.	Case studies.	Lab assignments





	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
2.3	Use the appropriate cloud computing solutions and recommendations according to the applications used.	Individual presentations. Brainstorming.	Class Activities Quizzes
3.0	Interpersonal Skills & Responsibility		
3.1	Learn how to search for information through library and internet.	Small group discussions.	Written Exam Homework assignments
3.2	Present a short report in a written form and orally using appropriate scientific language.	Whole group discussions. Brainstorming. Presentations.	Lab assignments Class Activities Quizzes
4.0	Communication, Information Technology, Numerical		
4.1	Work in groups, operate questions during the lecture and communicate with each other and with me electronically, and periodically visit the sites the lecturer recommended.	Small group discussions. Whole group discussions. Brainstorming. Presentations.	Written Exam Homework assignments Lab assignments Class Activities Quizzes
5.0	Psychomotor		
5.1	N/A.

5. Schedule of Assessment Tasks for Students During the Semester:

	Assessment task	Week Due	Proportion of Total Assessment
1	First written mid-term exam	6	15%
2	Second written mid-term exam	12	15%
3	Presentation, class activities, and group discussion	Every week	5%
4	Homework assignments	After Every chapter	5%
5	Practical exam	15	20%
6	Final written exam	16	40%
7	Total		100%





D. Student Academic Counseling and Support

Office hours: Sun: 8-10, Mon. 8-10, Tus. 1-3.

Office call: Mon. 12-1 and Tus 12-1

Email: i.alsmadi@mu.edu.sa

E. Learning Resources

1. List Required Textbooks :

- Cloud Computing Explained: Implementation Handbook for Enterprises, Recursive Press, ISBN 0956355609, 2009.

2. List Essential References Materials :

- Cloud Computing Explained: Implementation Handbook for Enterprises by John Rhoton (2009)

3. List Recommended Textbooks and Reference Material :

N/A

4. List Electronic Materials :

Determines as the course is going on.

5. Other learning material :

Videos and presentations are available with the instructor.

F. Facilities Required

1. Accommodation

Classrooms and Labs available at College of science in Zulfi.

2. Computing resources

Smart Board

3. Other resources

N/A

G. Course Evaluation and Improvement Processes

1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching:

- Analysis of students' results.
- Observation during work.
- Students' evaluations.
- Colleagues' evaluations.
- Evaluation questionnaire filled by the students.
- Interview a sample of students enrolled in the course to take their opinions.





2 Other Strategies for Evaluation of Teaching by the Program/Department

Instructor :

- Self-assessment.
- External evaluation.
- Periodic review of course (the Commission of study plans).

3 Processes for Improvement of Teaching :

- Taking into account the recommendations yielded from the internal review of the course.
- Guidelines about course teaching provided by the by study plans commission.
- Department Guidelines about faculty member performance on the basis of direct observation.
- Training and development.
- Workshops to improve the educational process.

4. Processes for Verifying Standards of Student Achievement

- Reviewing the final exam questions and a sample of the answers of the students by others.
- Visiting the other institutions that introduce the same course one time per semester.
- Watching the videos of other courses by international institutions.

5 Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement :

- Comparison of the course to its counterparts offered in similar departments.
- Periodic revision of course description by faculty member.
- Periodic revision of course description by the study plans and schedules Commission.
- Update learning resources related to the course to ensure that the course is kept up with developments in the field.
- Make use of statistical results of course evaluation made by students to improve and develop the course.
- Giving the opportunity for students to express their opinions about what is taught and receive suggestions and study their effectiveness.

Course Specification Approved

Department Official Meeting No(6) Date 23 / 12 / 1435 H

Course's Coordinator

Name : ISSA ALSMADI
Signature :
Date : 23/ 12 / 1435H

Department Head

Name : Dr. YossryAzzam
Signature :
Date : .../ ... / H

