



EASTERN MEDITERRANEAN UNIVERSITY  
SCHOOL OF COMPUTING AND TECHNOLOGY  
DEPARTMENT OF INFORMATION TECHNOLOGY  
COURSE POLICY SHEET



<b>Course Code</b>	ITEC498	<b>Course Title</b>	Cloud Computing Applications
<b>Semester</b>	2019-2020 Spring	<b>Language</b>	English
<b>Category</b>	AE (Area Elective)	<b>Level</b>	Fourth Year
<b>Workload</b>	180 Hours	<b>Teaching Format</b>	2 Hours Lecture, 2 Hours Laboratory
<b>EMU Credit</b>	(3,0,1) 3	<b>ECTS Credit</b>	6
<b>Prerequisite(s)</b>	-	<b>Course Web</b>	<a href="http://staff.emu.edu.tr/ibrahimadeshola/en">http://staff.emu.edu.tr/ibrahimadeshola/en</a>

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#### Course Description

This course focuses on the use of the most popular cloud computing applications and services that run on a distributed network using virtualized resources and accessed by common Internet protocols and networking standards. Its architecture, abstraction, virtualization, infrastructures, scaling deployments, machine learning in cloud, data management, security and privacy in cloud will be discussed in details.

#### General Learning Outcomes

On successful completion of this course students should be able to:

- Explain Cloud Computing abstraction and virtualization.
- Describe cloud storage services, pros and cons.
- Use different cloud storage services.
- Work with cloud APIs and SDKs.
- Describe machine learning in cloud.
- Secure data in cloud.
- Build own cloud with open stack.

#### Teaching Methodology / Classroom Procedures

- Each week there are two hours lecture sessions, and two hours lab sessions.
- Laboratory sessions are organized in parallel to lecture given in classrooms. During the lab sessions, students will be introducing to different cloud storage each week.
- Different cloud computing applications will be used during the lab sessions.

#### Course Materials / Main References

**Text Book:**

Thomas Erl, Ricardo Puttini, Zaigham Mahmood, *Cloud Computing: Concepts, Technology & Architecture*, ISBN-9780133387520.

**Resource Books:**

1. Cloud Computing for Science and Engineering (Scientific and Engineering Computation) 1st Edition by Ian Foster, Dennis B. Gannon

**Lecture Notes:**

All course materials are also available online in PowerPoint Slide.

Weekly Schedule / Summary of Topics	
<b>Week 1</b>	Introduction to Cloud Computing
<b>Week 2-3</b>	Managing Data in Cloud
<b>Week 4</b>	Computing in the Cloud
<b>Week 5</b>	Using and Managing Virtual Machines
<b>Week 6-7</b>	Using and Managing Containers
	<b>Midterm Examinations Period</b>
<b>Week 8</b>	Scaling Deployments
<b>Weeks 9</b>	Data Analytics in the Cloud
<b>Weeks 10</b>	Streaming Data to Cloud
<b>Week 11</b>	Machine Learning in the Cloud
<b>Week 12</b>	Developing Cloud Storage, Security and Privacy
	<b>Final Examinations Period</b>

Requirements
<ul style="list-style-type: none"> <li>▪ Each student can have only one make-up exam. One who misses an exam should provide a medical report or a valid excuse within 3 days after the missed exam. The make-up exam will be done at the end of the term and will cover all the topics. No make-up exam will be given for the quiz.</li> <li>▪ Students who do not pass the course and fail to attend the lectures regularly may be given NG grade.</li> <li>▪ You must collect at least 50% of the total Lab marks in order to pass the course.</li> </ul>

Method of Assessment					
Evaluation and Grading	Quiz	Project	Lab	Midterm Exam	Final Exam
Percentage	5%	15 %	20 %	30 %	30 %