

COMP 3012 INTRODUCTION TO CLOUD COMPUTING

Credit Points 10

Legacy Code 301203

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Description This unit, the first half of Amazon Web Services (AWS) Academy Cloud Computing Architecture curriculum, provides deep understanding of fundamental cloud computing concepts and how it can be applied to build cost-effective; highly available and fault tolerant systems. Students will learn concepts including system virtualisation; virtual machines; cloud networks; basic cloud storage and cloud databases; security in clouds; and auto-scaling, load balancing, and monitoring. All these aspects are explored in practice with AWS services.

School Computer, Data & Math Sciences

Discipline Computer Science, Not Elsewhere Classified.

Student Contribution Band HECS Band 2 10cp

Check your HECS Band contribution amount via the Fees (https://www.westernsydney.edu.au/currentstudents/current_students/fees/) page.

Level Undergraduate Level 3 subject

Pre-requisite(s) COMP 2004 OR COMP 2005

Learning Outcomes

On successful completion of this subject, students should be able to:

1. Explain the concept of system virtualisation
2. Explain and apply basic cloud services
3. Describe the main factors that affect the cost of cloud services and how they can be applied to minimise total cost of ownership
4. Explain and apply basic concepts of security, high availability, and fault tolerance in clouds
5. Analyse systems that utilise basic cloud services

Subject Content

1. System virtualization
2. Fundamentals of cloud computing and cloud networking
3. Basic cloud services: virtual machines, cloud storage, availability zones, auto-scaling, load balancing, and monitoring
4. Cost optimization in cloud services
5. Introduction to cloud security
6. Introduction to cloud databases
7. High availability and fault-tolerance in clouds

Assessment

The following table summarises the standard assessment tasks for this subject. Please note this is a guide only. Assessment tasks are regularly updated, where there is a difference your Learning Guide takes precedence.

Item	Length	Percent	Threshold	Individual/Group Task
Practical	15 minutes each for 10 labs	50	N	Individual
Quiz	10 minutes each for 9 quizzes	0	Y	Individual
Final Exam	2 hours	50	N	Individual

Teaching Periods

Autumn

Parramatta - Victoria Rd

Day

Subject Contact Bahman Javadi Jahantigh ([https://directory.westernsydney.edu.au/search/name/Bahman Javadi Jahantigh/](https://directory.westernsydney.edu.au/search/name/Bahman%20Javadi%20Jahantigh/))

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=COMP3012_22-AUT_PS_D#subjects)