

# INFO 7018 CLOUD SYSTEMS DEVELOPMENT

**Credit Points** 10

**Legacy Code** 301386

**Coordinator** Rodrigo Neves Calheiros ([https://directory.westernsydney.edu.au/search/name/Rodrigo Neves Calheiros/](https://directory.westernsydney.edu.au/search/name/Rodrigo%20Neves%20Calheiros/))

**Description** The majority of backend systems supporting modern mobile applications as well as commercial applications are built to run on the cloud. This requires a shift of design where reliability, scalability, performance, and security are key considerations in every stage of the software development process. This subject incorporates the AWS Academy Cloud Developing curriculum, to support learning in the areas of designing, developing, deploying, and monitoring applications for the cloud. Through the completion of an applied project, students will implement the techniques they have learned to enable communication and coordination between services, options for data persistence in the cloud, and optimisation of applications for, potentially, millions of users. Students completing this subject can pursue careers as Cloud Engineers and Software Developers.

**School** Computer, Data & Math Sciences

**Discipline** Information Technology, Not Elsewhere Classified.

**Student Contribution Band** HECS Band 2 10cp

Check your fees via the Fees ([https://www.westernsydney.edu.au/currentstudents/current\\_students/fees/](https://www.westernsydney.edu.au/currentstudents/current_students/fees/)) page.

**Level** Postgraduate Coursework Level 7 subject

**Pre-requisite(s)** COMP 7004

**Equivalent Subjects** INFO 7008 Modern Software Architectures

## Restrictions

Students must be enrolled in a postgraduate program.

## Assumed Knowledge

Student must know how to write Objected-Oriented code. Students must have familiarity with networking concepts.

## Learning Outcomes

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

1. Evaluate cloud systems and services, as well as design approaches for cloud applications.
2. Analyse relevant monitoring systems to solve production issues.
3. Critically review system requirement determining appropriate cloud-based applications, approaches and services.
4. Design a complete cloud-based application using cloud technologies.
5. Implement cloud APIs and web-based applications and services using a range of technologies.

## Subject Content

1. Cloud application design and architecture
2. Data persistence in the cloud
3. Strategies for application optimisation
4. Cloud application deployment and monitoring

5. Cloud application communication and coordination
6. Cloud application security

## 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.

| Type            | Length                                             | Percent | Threshold | Individual/ Group | Mandatory Task |
|-----------------|----------------------------------------------------|---------|-----------|-------------------|----------------|
| Applied Project | Group Report: 5000 words; Presentation: 15 minutes | 30      | N         | Group             | N              |
| Practical       | 90 minutes                                         | 30      | N         | Individual        | N              |
| Quiz            | 10 minutes (per Quiz)                              | S/U     | N         | Individual        | N              |
| Report          | 2500 words                                         | 25      | N         | Individual        | N              |
| Viva Voce       | 5 minutes                                          | 15      | N         | Individual        | Y              |

Teaching Periods

## Spring (2025)

### Parramatta - Victoria Rd

#### On-site

**Subject Contact** Rodrigo Neves Calheiros ([https://directory.westernsydney.edu.au/search/name/Rodrigo Neves Calheiros/](https://directory.westernsydney.edu.au/search/name/Rodrigo%20Neves%20Calheiros/))

View timetable ([https://classregistration.westernsydney.edu.au/odd/timetable/?subject\\_code=INFO7018\\_25-SPR\\_PS\\_1#subjects](https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=INFO7018_25-SPR_PS_1#subjects))