



- Enrolment Period 1
- Enrolment Period 2

School: Science

This unit information may be updated and amended immediately prior to semester. To ensure you have the correct outline, please check it again at the beginning of semester.

Unit Title	Software Architectures and Design
Unit Code	CSI3106
Year	2017
Enrolment Period	1
Version	1
Credit Points	15
Full Year Unit	N
Mode of Delivery	On Campus Online
Unit Co-ordinator	<a href="#">Dr Naeem Khalid JANJUA</a>

Description

This unit focuses on the study of approaches and techniques for software system design and software architecture. A software architecture outlines the components of a system and the interactions between those components, and provides the key elements for controlling and evolving the software system. This unit will examine various design models, different types of software architectures and their roles, architecture analysis and creation as well as methods of documenting an architecture.

Prerequisite Rule

Must have passed CSI2343

Learning Outcomes

On completion of this unit students should be able to:

1. Identify elements required for creating a high quality software architecture.
2. Develop different models of design and design strategies.
3. Apply design assessments and verification using appropriate methods.
4. Describe different types of software architecture and their role in software system.
5. Implement a case study, demonstrating appropriate use of design techniques and appropriate software architecture.
6. Conduct software architecture analysis and document the software architecture appropriately.

Unit Content

1. Introduction to software design.
2. Design strategies and models.
3. Design assessments and verification.
4. Software architectures, their benefits and limitations.
5. Common design patterns.
6. Using appropriate patterns to produce an architectural structure.
7. Documenting an architectural structure: Architecting notations, techniques and processes.

Additional Learning Experience Information

Learning will be through lectures and follow-up practical sessions. Development of practical skills will be within workshops and team situations.

Assessment

GS1 GRADING SCHEMA 1 Used for standard coursework units

Students please note: The marks and grades received by students on assessments may be subject to further moderation. All marks and grades are to be considered provisional until endorsed by the relevant Board of Examiners.

ON CAMPUS

Type	Description	Value
Assignment	Software Architectures and Design Problems	15%
Case Study	Software Architectures and Implementation	35%
Examination ^	End of Semester Examination	50%

ONLINE

Type	Description	Value
Assignment	Software Architectures and Design Problems	15%
Case Study	Software Architectures and Implementation	35%
Examination ^	End of Semester Examination	50%

^ Mandatory to Pass

Core Reading(s)

- Taylor, R. N., Medvidovic, N., & Dashofy, E. (2009). *Software architecture. Foundations, theory, and practice*. New York, NY: John Wiley & Sons.

Disability Standards for Education (Commonwealth 2005)

For the purposes of considering a request for Reasonable Adjustments under the Disability Standards for Education (Commonwealth 2005), inherent requirements for this subject are articulated in the Unit Description, Learning Outcomes and Assessment Requirements of this entry. The University is dedicated to provide support to those with special requirements. Further details on the support for students with disabilities or medical conditions can be found at the [Student Equity, Diversity and Disability Service website](#).

Academic Misconduct

Edith Cowan University has firm rules governing academic misconduct and there are substantial penalties that can be applied to students who are found in breach of these rules. Academic misconduct includes, but is not limited to:

- plagiarism;
- unauthorised collaboration;
- cheating in examinations;
- theft of other students' work;

Additionally, any material submitted for assessment purposes must be work that has not been submitted previously, by any person, for any other unit at ECU or elsewhere.

The ECU rules and policies governing all academic activities, including misconduct, can be accessed through the ECU website.