Faculty of Science, Engineering and Technology
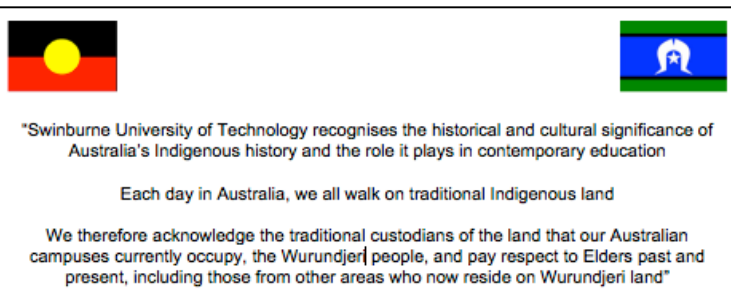
Unit Outline

SWE30010

Development Project 2: Design, Planning and Management

Semester 1 2017

Please read this Unit Outline carefully. It includes:

PART A   Unit summary

PART B   Your Unit in more detail

PART C   Further information

PART A: Unit Summary

Unit Code(s)		SWE30010
Unit Title		Development Project 2
Duration		12 week
Total Contact Hours		48 hours = 24 hour lecture + 24 hour tute
Requisites:		

	Pre-requisites	• SWE20001 Development Project 1 – Tools and Practices AND
		• ONE of the following
		   o COS20011 Software Development in Java
		   o COS20007 Object-Oriented Programming
		   o SWE20004 Technical Software Development

	Co-requisites	Nil
	Concurrent pre-requisites	Nil
	Anti-requisites	SWE20003 Software Project: Practices and Management
	Assumed knowledge	
Credit Points		12.5
Campus/Location		Hawthorn
Mode of Delivery		Lectures and Tutorials
Assessment Summary		100% Portfolio assessment (no exam)

Aims

This unit of study aims to expose students to the range of project management practices that are used in contemporary software development projects, so that they learn and understand the major issues that project managers have to handle.

Unit (Intended) Learning Outcomes

Students who successfully complete this Unit should be able to:

1. Apply techniques to define scope, break down tasks, estimate effort, manage risks, and schedule resources in the planning of a software development project
2. Select, justify, and use appropriate design patterns, algorithms, data structures, and architectural styles to design a software solution
3. Utilise contemporary tools and techniques to document software artefacts, and track and report project progress
4. Apply and use contemporary tools and techniques to work effectively as a member of a software development team, and to reflect upon group work experiences
5. Review the quality of a software product based on a chosen quality model / framework with justifications

Swinburne Engineering Competencies for this Unit of Study

This Unit of Study will contribute to you attaining the following Swinburne Engineering Competencies:

- Discipline Specific: Proficiently applies advanced technical knowledge of the specific discipline within that context
- Professional Practice: Appreciates the principles of professional engineering practice in a sustainable context
- Engineering Methods: Applies engineering methods in practical applications
- Problem Solving: Systematically uses engineering methods in solving complex problems
- Project Management: Systematically uses engineering methods in conducting and managing projects
- Communication: Demonstrates effective communication to professional and wider audiences
- Information Management: Demonstrates seeking, using, assessing and managing information
- Professional Self: Demonstrates professionalism
- Management of Self: Demonstrates self-management processes

Content

- Project Management Issues
  - Scope, Time, Cost, Quality
  - Risk
  - Work Breakdown Structures
  - Estimation techniques
  - Project Planning techniques
- Risk Management
  - Common project risk categories
  - Risk identification and prioritisation
  - Managing risks using spikes
- Quality Management
  - Defect identification and classification
  - Quality reviews
  - Defect reporting
  - Change logs
- Measurement
  - Size and complexity metrics
  - Metric tools
  - Relationships between defect and metrics
- Tracking and Reporting

PART B: Your Unit in more detail

Unit Improvements

As this is a new unit of study, there is no feedback from previous students. You should always consider how this unit could be improved and discuss this with the unit convenor.

Feedback provided by previous students through the Student Survey has resulted in improvements that have been made to this unit. Recent improvements include:

• None

Unit Teaching Staff

Name	Role	Room	Phone	Email	Consultation Times
Edmonds Lau	Unit Convenor / Lecturer / Tutor	EN510a	9214 4367	elau@swin.edu.au	Thu 10.30 – 12.30
Prof. Jun Han	Moderator	EN507b	9214 5732	jhan@swin.edu.au	
Tanjila Kanij	Tutor			tanjila.kanij@gmail.com	
Naurin Afrin	Tutor			nafrin@swin.edu.au	

Learning and Teaching Structure

Activity	Total Hours	Hours per Week	Teaching Period Weeks
Lectures	24 hours	2 hours	Weeks 1 to 12
Tutorials	22 hours	2 hours	Weeks 2 to 12

In a Semester, you should normally expect to spend, on average, twelve and a half hours of total time (formal contact time plus independent study time) a week on a 12.5 credit point unit of study.

Week by Week Schedule

Week	Week Beginning	Teaching and Learning Activity	Assessment Tasks	Notes
1	Feb 27	Introduction; Scrum and Scoping		No Tutes in week 1
2	Mar 06	Architecture Style and Definition of Done		
3	Mar 13	Software Quality: Model and Review		
4	Mar 20	Scrum Planning, WBS and Estimation 1		
5	Mar 27	Software Design; Tracking and Monitoring		
6	Apr 03	Effort Estimation 2	Complete weekly tasks / Submit task progress for feedback and signoff	
7	Apr 10	Traditional Project Management		
	Apr 17	Semester break		
8	Apr 24	Traditional Project Planning		
9	May 01	Traditional Risk Management		
10	May 08	Team Management		
11	May 15	Project Closure		[D / HD] Portfolio
12	May 22	Portfolio Finalization		Interview Booking
13	May 29	Non-teaching week; Exam period	[P / C] Portfolio submission (May 29)	
14	Jun 05	Exam period	[D / HD] Portfolio submission (Jun 05) Portfolio interview (Jun 07 – 09)	

Assessment

a) Assessment Overview

Intended Grade	Tasks and Details	Individual or Group	Weighting	Unit Learning Outcomes that this assessment task relates to	Assessment Due Date
P / C	Portfolio	Individual	100%	ALL	May 29
D / HD	Portfolio and Portfolio interview	Individual	100%	ALL	Jun 5 Jun 7 – 9

b) Minimum requirements to pass this Unit

This unit uses portfolio assessment (see below) to determine your final grade. As the minimum requirements of assessment to pass this unit and meet all ULOs (or ILOs) to a minimum standard, an undergraduate student must submit and present a passable Portfolio which includes all Pass Tasks completed to the minimum standard.

If you do not submit a passable Portfolio, you will receive a maximum of 44% (N) as your total mark for the unit and will not be eligible for a conceded pass.

If your submitted Portfolio does not meet the minimum Pass standard (i.e. all Pass Tasks are signoff as "**Complete**" and an appropriate learning summary report), you will receive a maximum of 44% (N) as your total mark for the unit and will not be eligible for a conceded pass.

c) Examinations

This unit uses portfolio assessment (see below) to determine your final grade. Hence, it does not have an examination. However, for students aiming D / HD, they will be expected to be available for the Portfolio interview period.

d) Submission Requirements

Weekly Task work and assignment work requirements are detailed in documents on the unit website, and this work must be submitted as specified in those documents.

Please ensure you keep a copy of all assessments that are submitted.

An Assessment Cover Sheet must be submitted with your final portfolio. The standard Assessment Cover Sheet is available from the Current Students web site (see Part C). This unit of study uses **portfolio assessment** to determine your final grade. You are required to submit a portfolio that contains the following items:

1. **Learning Summary Report** that reflects on what you have learnt, and shows how your portfolio addresses the assessment criteria for each intended learning outcome.

2. A **number of pieces** of work that demonstrate how you have met **all** of the unit's intended learning outcomes. This must include

   a. All required weekly tasks are completed and marked as "Complete" by staff

   b. Clear evidence of you working as an effective team member for all required weekly task

   c. Demonstrated understanding of the unit's material in the context of a customized project (for D or HD)

   d. A research article / report (for HD)

e) Extensions and Late Submission

Late Submissions - Unless an extension has been approved, late submissions will result in a penalty. You will be penalised 10% of the assessment's worth for each calendar day the task is late, up to a maximum of 5 working days. After 5 working days a zero result will be recorded.

f) Referencing

To avoid plagiarism, you are required to provide a reference whenever you include information from other sources in your work. Further details regarding plagiarism are available in Section C of this document.

Referencing conventions required for this unit are: Harvard reference and citation notation (http://www.swinburne.edu.au/library/referencing/harvard-complete-guide/)

g) Groupwork Guidelines

A group assignment is the collective responsibility of the entire group, and if one member is temporarily unable to contribute, the group should be able to reallocate responsibilities to keep to schedule. In the event of longer-term illness or other serious problems involving a member of group, it is the responsibility of the other members to immediately notify the Unit Convenor or relevant tutor.

Group submissions must be submitted with an Assignment Cover Sheet, signed by all members of the group.

All group members must be satisfied that the work has been correctly submitted. Any penalties for late submission will generally apply to all group members, not just the person who submitted.

Required Textbook(s)

No required textbook

Recommended Reading Materials

The Library has a large collection of resource materials, both texts and current journals. Listed below are some references that will provide valuable supplementary information to this unit. It is also recommended that you explore other sources to broaden your understanding.

BECK, K. & FOWLER, M. 2001. *Planning extreme programming,* Boston, Addison-Wesley.

BERKUN, S. 2005. *The art of project management,* Sebastopol, CA, O'Reilly.

HIGHSMITH, J. A. 2004. *Agile project management : creating innovative products,* Boston, Addison-Wesley.

HUGHES, B. & COTTERELL, M. 2009. *Software Project Management*, McGraw-Hill.

PRESSMAN, R. S. 2010. *Software engineering : a practitioner's approach,* New York, McGraw-Hill Higher Education.

SCHWABER, K. & BEEDLE, M. 2002. *Agile software development with Scrum,* Upper Saddle River, NJ, Prentice Hall.

WYSOCKI, R. K. 2009. *Effective project management : traditional, agile, extreme,* Indianapolis, IN, Wiley Publishing, Inc.

PART C: FURTHER INFORMATION

For further information on any of the below topics, refer to Swinburne's Current Students web page http://www.swinburne.edu.au/student/.

Student Charter

Please familiarise yourself with Swinburne's Student Charter. The charter describes what students can reasonably expect from Swinburne in order to enjoy a quality learning experience. As students contribute to their own learning experience to that of their fellow students, the charter also defines the University's expectations of students.

Student behaviour and wellbeing

Swinburne has a range of policies and procedures that govern how students are expected to conduct themselves throughout the course of their relationship with the University. These include policies on expected standards of behaviour and conduct which cover interaction with fellow students, staff and the wider University community, in addition to following the health and safety requirements in the course of their studies and whilst using University facilities.

All students are expected to familiarise themselves with University regulations, policies and procedures and have an obligation to abide by the expected guidelines. Any student found to be in breach may be subject to relevant disciplinary processes. Some examples of relevant expected behaviours are:

- Not engaging in student misconduct
- Ensuring compliance with the University's Anti-Discrimination, Bullying and Violence and Sexual Harassment requirements
- Complying with all Swinburne occupational health and safety requirements, including following emergency and evacuation procedures and following instructions given by staff/wardens or emergency response.

In teaching areas, it is expected that students conduct themselves in a manner that is professional and not disruptive to others. In all Swinburne laboratories, there are specific safety procedures which must be followed, such as wearing appropriate footwear and safety equipment, not acting in a manner which is dangerous or disruptive (e.g. playing computer games), and not bringing in food or drink.

Blackboard

You should regularly access the Swinburne Course Management System (Blackboard) available via http://ilearn.swin.edu.au. Blackboard is regularly updated with important Unit information and communications.

Communication

All communication will be via your Swinburne email address. If you access your email through a provider other than Swinburne, then it is your responsibility to ensure that your Swinburne email is redirected to your private email address.

Plagiarism

Plagiarism is the action or practice of taking and submitting or presenting the thoughts, writings or other work of someone else as though it is your own work. Plagiarism includes any of the following, without full and appropriate acknowledgment to the original source(s):

- The use of the whole or part of a computer program written by another person;

- the use, in essays or other assessable work, of the whole or part of a written work from any source including but not limited to a book, journal, newspaper article, set of lecture notes, current or past student's work, any other person's work, a website or database;
- The paraphrasing of another's work;
- The use of musical composition, audio, visual, graphic and photographic models,
- The use of realia that is objects, artefacts, costumes, models and the like.

Plagiarism includes the submission of assessments that have been developed by another person or service through contract, tender or online writing services.

Plagiarism also includes the preparation or production and submission or presentation of assignments or other work in conjunction with another person or other people when that work should be your own independent work. This remains plagiarism whether or not it is with the knowledge or consent of the other person or people. It should be noted that Swinburne encourages its students to talk to staff, fellow students and other people who may be able to contribute to a student's academic work but that where independent assignment is required, submitted or presented work must be the student's own.

Enabling plagiarism contributes to plagiarism and therefore will be treated as a form of plagiarism by the University. Enabling plagiarism means allowing or otherwise assisting another student to copy or otherwise plagiarise work by, for example, allowing access to a draft or completed assignment or other work.

Swinburne University uses plagiarism detection software (such as Turnitin) for assignments submitted electronically via Blackboard. Your Convenor will provide further details.

The penalties for plagiarism can be severe ranging from a zero grade for an assessment task through to expulsion from the unit and in the extreme, exclusion from Swinburne. Consequently you need to avoid plagiarism by providing a reference whenever you include information from other sources in your work.

Student support

You should talk to your Unit Convenor or Student Services, for information on academic support services available for Swinburne students.

Special consideration

If your studies have been adversely affected due to serious and unavoidable circumstances outside of your control (e.g. severe illness or unavoidable obligation) you may be able to apply for special consideration (SPC).

Applications for Special Consideration will be submitted via the SPC online tool normally no later than 5.00pm on the third working day after the submission/sitting date for the relevant assessment component.

Special needs

Sometimes students with a disability, a mental health or medical condition or significant carer responsibilities require reasonable adjustments to enable full access to and participation in education. Your special needs can be addressed by Swinburne's Disability Services, who can negotiate and distribute an 'Education Access Plan' that outlines recommendations for university teaching and examination staff. You must notify the University Disability Liaison Officer of your disability or condition within one week after the commencement of a unit of study to allow the University to make reasonable adjustments.

Review of marks

An independent marker reviews all fail grades for major assessment tasks. In addition, a review of assessment is undertaken if your final result is a marginal fail (45-49) or within 2 marks of a grade threshold.

If you are not satisfied with the result of an assessment you can ask the Unit Convenor to review the result. Your request must be made in writing within 10 working days of receiving the result. The Unit Convenor will review your result to determine if your result is appropriate.

If you are dissatisfied with the outcomes of the review you can lodge a formal complaint.

Feedback, complaints and suggestions

In the first instance you may discuss any issues with your Unit Convenor. If you are dissatisfied with the outcome of the discussions with the Unit Convenor or would prefer not to deal with your Unit Convenor, then you can complete a feedback form.

Advocacy

You are advised to seek advice from the staff at the Swinburne Student Amenities Association (SSAA) if you require assistance with any academic issues.