



MONASH University
Information Technology

FIT4002
Software engineering studio project

Unit Guide

Semester 2, 2013

The information contained in this unit guide is correct at time of publication. The University has the right to change any of the elements contained in this document at any time.

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FIT4002 Software engineering studio project - Semester 2, 2013

Students will undertake a large project and work in groups on a software project for a client. The client may be internal to Monash or from the industry or research organisation. In general, projects involve all aspects of the system development lifecycle. Groups are responsible for their own project management, with guidance from a supervisor. Some projects will warrant students working in pairs or individually.

Contact Hours

2 hrs lectures/wk

Workload requirements

For Software Engineering Studio unit, the workload commitments are for 2 semesters of study:

- attending weekly two-hour seminar series (presentations by unit coordinator and guest speakers; students presentations)
- weekly or fortnightly group meetings with project supervisor
- regular meetings with client (may be off-campus)
- regular meetings of project group
- 8-10 hrs of personal study including undertaking all stages of the software development lifecycle for the project, preparation of project documentation, preparation for individual and group presentation, software walkthroughs and SWEBOK interviews.

Unit Relationships

Prohibitions

CSE4002

Prerequisites

FIT3077 or CSE3308 and one of FIT2002, FIT3086 or BUS2176

Chief Examiner

Dr Yuan-Fang Li

Campus Lecturer

Clayton

Yuan-Fang Li (unit coordinator and project supervisor)

Consultation hours: Matters for unit coordinator may be raised during weekly seminar slot, matters for project supervisor may be raised during fortnightly meeting

Carlo Kopp (project supervisor)

FIT4002 Software engineering studio project - Semester 2, 2013

Consultation hours: Matters may be raised during fortnightly meeting

Robert Merkel (project supervisor)

Consultation hours: Matters may be raised during fortnightly meeting

Peter Tischer (project supervisor)

Consultation hours: Matters may be raised during fortnightly meeting

Robyn Mcnamara (project supervisor)

Consultation hours: Matters may be raised during fortnightly meeting

Academic Overview

Learning Outcomes

At the completion of this unit students will have:

- experience of all stages in the development of a SE project
- experience of the role and responsibilities of clients and developers in a SE project
- understanding of the way in which computer systems are designed, developed and implemented;
- understanding of the role of methodologies, tools and techniques;
- understanding of the processes and components of a quality system;
- ability to adopt a systematic and professional approach to the production of quality computer systems;
- understanding of ethical behaviour;
- ability to plan and manage the full range of activities in an SE project;
- ability to work productively in a team and individually;
- ability to communicate effectively with clients and users;
- ability to develop and deliver on time a computer system that meets the specified requirements.

Unit Schedule

| Week | Activities | Assessment |
|------|---|--|
| 0 | Unit covers two semesters, however this unit schedule lists only semester 2 activities (see Moodle site for full year schedule) | No formal assessment or activities are undertaken in week 0 |
| 1 | Recap of semester 1 and summary of SWEBOK interviews | |
| 2 | Guest lecture series | Assessment task 5: process and project documentation (final version due at the end of the semester). |
| 3 | Guest lecture series | |
| 4 | Guest lecture series | |
| 5 | Guest lecture series | |
| 6 | Guest lecture series | |
| 7 | Guest lecture series | |
| 8 | Introduction to SWEBOK and interview preparation | |
| 9 | Software walkthroughs | Assessment task 2: software walkthrough with supervisor and client. |
| 10 | Software walkthroughs | Assessment task 2 (cont'ed): software walkthrough with supervisor and client. |
| 11 | Group presentations | Assessment task 3: group presentation of project. Client acceptance sign-off due. |
| 12 | Group presentations | Assessment task 3 (cont'ed): group presentation of project. Assessment tasks 5 and 6 (process & project documentation and software product): final version due. |
| | SWOT VAC | No formal assessment is undertaken in SWOT VAC. Assessment task 4: SWEBOK Interviews, will be held during examination period. |
| | Examination period | LINK to Assessment Policy: http://policy.monash.edu.au/policy-bank/academic/education/assessment/assessment-in-coursework-policy.html |

*Unit Schedule details will be maintained and communicated to you via your learning system.

Assessment Summary

Assignments: 100%

Assessment Task

Value

Due Date

5%

In seminar slot in semester 1 (Weeks 7 to 9)

Unit Schedule

Individual seminar presentation

| | | |
|-----------------------------------|-----|--|
| Software walk throughs | 20% | One code walk through scheduled each semester (Weeks 9 and 10) |
| Group presentations | 20% | One presentation each semester in the seminar slot (Weeks 11 and 12) |
| Individual SWEBOK interviews | 5% | Will be scheduled during the examination period |
| Process and project documentation | 20% | Different due dates throughout the project. Final versions of all documentation will be assessed at the end of the project (see unit schedule and more detailed breakdown on Moodle site). |
| Software product | 30% | Client acceptance sign-off due semester 2 (Week 11), final project website with all software artifacts due end of semester 2 (Week 12) |

Teaching Approach

- **Studio teaching**

Studio teaching is a facilitated active, participatory, peer learning approach.

- **Seminars**

Students will listen to presentations from the unit-coordinator, guest speakers and fellow students on topics relevant to the studio project.

Assessment Requirements

Assessment Policy

Faculty Policy - Unit Assessment Hurdles

(<http://www.infotech.monash.edu.au/resources/staff/edgov/policies/assessment-examinations/unit-assessment-hu>)

Academic Integrity - Please see the Demystifying Citing and Referencing tutorial at

<http://lib.monash.edu/tutorials/citing/>

Assessment Tasks

Participation

Attendance at all seminar classes is expected.

Students are also expected to attend weekly or fortnightly meetings with project supervisors.

• Assessment task 1

Title:

Individual seminar presentation

Description:

Each student will be required to give a short seminar presentation to the class on a relevant topic (topic to be prior approved by the unit coordinator).

Weighting:

5%

Criteria for assessment:

Assessment criteria will be:

- ◆ Amount of research and preparation
- ◆ Understanding of the topic
- ◆ Quality of the oral presentation

Due date:

In seminar slot in semester 1 (Weeks 7 to 9)

• Assessment task 2

Title:

Software walk throughs

Description:

Each semester, each project group will undertake a software walkthrough with the project supervisor. The unit coordinator and/or the client may also attend.

Weighting:

20%

Criteria for assessment:

There will be one software walkthrough each semester (10% each).

For each walkthrough, 5% will be a group mark, 5% an individual mark.

For the group mark, the assessment criteria will be the overall quality of the project group's code as a whole.

Assessment Requirements

For the individual mark, the assessment criteria will be their individual contribution to the project group code, as well as their demonstrated understanding of the code.

Due date:

One code walk through scheduled each semester (Weeks 9 and 10)

• Assessment task 3

Title:

Group presentations

Description:

Each project group will give a presentation each semester in the class seminar time slot. In semester 1, it will be presentation on the project and progress to date. In semester 2, the presentation will describe the project as a whole and the final software product.

Weighting:

20%

Criteria for assessment:

There will be one group presentation each semester (10% each).

For each presentation, 5% will be a group mark, 5% an individual mark.

All students in a team will get the same group mark (5%) for the following assessment criteria:

1. Selection and organisation of content
2. Co-ordination of multiple speakers
3. Quality of visual aids
4. Timing

Each student will receive an individual mark (5%) for the following assessment criteria:

1. Quality of presentation (understandability, coherence)
2. Voice (audibility, intonation, variation)
3. Use of language (e.g., vocabulary, appropriate level, use of jargon)
4. Non-verbal communication (e.g., body language, eye contact)

Due date:

One presentation each semester in the seminar slot (Weeks 11 and 12)

• Assessment task 4

Title:

Individual SWEBOK interviews

Description:

Each semester, the student will be interviewed on their knowledge and understanding of SWEBOK, and how it relates to their project. The 15-30 minute interview is a formal exam will be with the unit coordinator, the project supervisor and other members of the BSE teaching group.

Weighting:

5%

Criteria for assessment:

Assessment criteria:

- ◆ Knowledge and understanding of the fundamental areas of software engineering (SWEBOK)
- ◆ Ability to relate SWEBOK to their particular project

Hurdle requirements:

The semester 1 interview will be a hurdle, where the student will receive written feedback.
The semester 2 interview will be marked.

Due date:

Will be scheduled during the examination period

• **Assessment task 5**

Title:

Process and project documentation

Description:

There will be a variety of process and project documentation to be produced during the project, which must be updated as required. See Moodle site for the unit for details.

Weighting:

20%

Criteria for assessment:

Each piece of documentation will be assessed on:

- ◆ Appropriateness of content
- ◆ Technical quality of content
- ◆ Quality of writing and presentation

While there will be a single overall mark out of 20 for this assessment component, the marks each individual team member receives may be adjusted to reflect their individual contribution to the project.

Due date:

Different due dates throughout the project. Final versions of all documentation will be assessed at the end of the project (see unit schedule and more detailed breakdown on Moodle site).

• **Assessment task 6**

Title:

Software product

Description:

The final software deliverable for the project.

Weighting:

30%

Criteria for assessment:

The overall software deliverable for the project will be assessed on:

- ◆ Scope of functionality
- ◆ Performance on acceptance testing
- ◆ Quality of software artifacts (e.g. reusability, maintainability)

While there will be a single overall mark out of 30 for this assessment component, the marks each individual team member receives may be adjusted to reflect their individual contribution to the project.

Due date:

Client acceptance sign-off due semester 2 (Week 11), final project website with all software artifacts due end of semester 2 (Week 12)

Learning resources

Reading list

- Relevant Journal Articles and Conference Proceedings depending on the project chosen.
- Gilb T and Graham D, Software inspection, Addison-Wesley, 1993
- Stiller, Project-based Software Engineering, Prentice-Hall, 2001
- Humphrey W, Managing the software process, Addison-Wesley, 1989
- Pfleeger S.L., Software Engineering Theory and Practice, Prentice Hall 2001
- Somerville I.S., Software Engineering Addison Wesley 2001
- Sallis P, Tate G and MacDonell S, Software Engineering: Practice, Management, Improvement, Addison-Wesley, 1995
- Humphrey W, Introduction to the Personal Software Process, Addison Wesley 2000
- Pressman R.S., Software Engineering, A Practitioner's approach, Fifth Ed., McGraw Hill, 2001
- Maciaszek, Requirements Analysis and System Design: Developing Information Systems with UML 2001, Prentice-Hall, 2001

Monash Library Unit Reading List

<http://readinglists.lib.monash.edu/index.html>

Feedback to you

Types of feedback you can expect to receive in this unit are:

- Informal feedback on progress in labs/tutes
- Interviews
- Other: Verbal feedback on progress from supervisor in fortnightly meetings; written comments on drafts of project documentation; written feedback on first SWEBOK interview; marking guide on group presentations; verbal feedback from supervisor and client during software walkthrough

Extensions and penalties

Submission must be made by the due date otherwise penalties will be enforced.

You must negotiate any extensions formally with your campus unit leader via the in-semester special consideration process: <http://www.monash.edu.au/exams/special-consideration.html>

Returning assignments

Students can expect assignments to be returned within two weeks of the submission date or after receipt, whichever is later.

Assignment submission

It is a University requirement

(<http://www.policy.monash.edu/policy-bank/academic/education/conduct/plagiarism-procedures.html>) for students to submit an assignment coversheet for each assessment item. Faculty Assignment coversheets can be found at <http://www.infotech.monash.edu.au/resources/student/forms/>. Please check with your Lecturer on the submission method for your assignment coversheet (e.g. attach a file to the online assignment submission, hand-in a hard copy, or use an online quiz). Please note that it is your

Assessment Requirements

responsibility to retain copies of your assessments.

Online submission

If Electronic Submission has been approved for your unit, please submit your work via the learning system for this unit, which you can access via links in the my.monash portal.

Required Resources

Please check with your lecturer before purchasing any Required Resources. Limited copies of prescribed texts are available for you to borrow in the library, and prescribed software is available in student labs.

Customised Software Engineering laboratory (the MUSE lab) at Clayton with the standard lab image plus high end software engineering & testing tools from IBM/Rational, Websphere software from IBM, Testing tools from Compuware. Open source tools such as Eclipse, Junit & coverage testing tools.

Field trips

May require visit to project client.

Other Information

Policies

Monash has educational policies, procedures and guidelines, which are designed to ensure that staff and students are aware of the University's academic standards, and to provide advice on how they might uphold them. You can find Monash's Education Policies at:

www.policy.monash.edu.au/policy-bank/academic/education/index.html

Key educational policies include:

- Academic integrity;
<http://www.policy.monash.edu/policy-bank/academic/education/conduct/student-academic-integrity-policy.html>
- Assessment in Coursework Programs;
<http://www.policy.monash.edu/policy-bank/academic/education/assessment/assessment-in-coursework-policy.html>
- Special Consideration;
<http://www.policy.monash.edu/policy-bank/academic/education/assessment/special-consideration-policy.html>
- Grading Scale;
<http://www.policy.monash.edu/policy-bank/academic/education/assessment/grading-scale-policy.html>
- Discipline: Student Policy;
<http://www.policy.monash.edu/policy-bank/academic/education/conduct/student-discipline-policy.html>
- Academic Calendar and Semesters; <http://www.monash.edu.au/students/dates/>
- Orientation and Transition; <http://intranet.monash.edu.au/infotech/resources/students/orientation/>
- Academic and Administrative Complaints and Grievances Policy;
<http://www.policy.monash.edu/policy-bank/academic/education/management/complaints-grievance-policy.html>
- Code of Practice for Teaching and Learning;
<http://www.policy.monash.edu.au/policy-bank/academic/education/conduct/suppdocs/code-of-practice-teaching-and-learning.html>

Graduate Attributes Policy

<http://www.policy.monash.edu/policy-bank/academic/education/management/monash-graduate-attributes-policy.html>

Student services

The University provides many different kinds of support services for you. Contact your tutor if you need advice and see the range of services available at <http://www.monash.edu.au/students>. For Sunway see <http://www.monash.edu.my/Student-services>, and for South Africa see <http://www.monash.ac.za/current/>.

Monash University Library

The Monash University Library provides a range of services, resources and programs that enable you to save time and be more effective in your learning and research. Go to www.lib.monash.edu.au or the library tab in [my.monash](#) portal for more information. At Sunway, visit the Library and Learning Commons at <http://www.lib.monash.edu.my/>. At South Africa visit <http://www.lib.monash.ac.za/>.

Disability Liaison Unit

Students who have a disability or medical condition are welcome to contact the Disability Liaison Unit to discuss academic support services. Disability Liaison Officers (DLOs) visit all Victorian campuses on a regular basis.

Website: <http://www.monash.edu/equity-diversity/disability/index.html> Telephone: 03 9905 5704 to book an appointment with a DLO; or contact the Student Advisor, Student Community Services at 03 55146018 at Sunway Email: dlu@monash.edu Drop In: Equity and Diversity Centre, Level 1, Building 55, Clayton Campus, or Student Community Services Department, Level 2, Building 2, Monash University, Sunway Campus

Your feedback to Us

Monash is committed to excellence in education and regularly seeks feedback from students, employers and staff. One of the key formal ways students have to provide feedback is through the Student Evaluation of Teaching and Units (SETU) survey. The University's student evaluation policy requires that every unit is evaluated each year. Students are strongly encouraged to complete the surveys. The feedback is anonymous and provides the Faculty with evidence of aspects that students are satisfied and areas for improvement.

For more information on Monash's educational strategy, see:

www.monash.edu.au/about/monash-directions and on student evaluations, see:
www.policy.monash.edu/policy-bank/academic/education/quality/student-evaluation-policy.html

Previous Student Evaluations of this Unit

Feedback from previous SETU surveys has been incorporated into changes in the unit structure this semester.

If you wish to view how previous students rated this unit, please go to
<https://emuapps.monash.edu.au/unitevaluations/index.jsp>