MONASH University
Information Technology

Unit Guide

FIT3162
Computer science project 2

Semester 2, 2018

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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Status: Approved

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Unit handbook information

Synopsis

This unit provides practical experience in researching, designing, developing and testing a non-trivial computer science project. Projects are generally software-based, although sometimes they may involve hardware development or investigation of theory. Projects cover the whole process of software (or hardware) development, from analysis through design to implementation and testing. Comprehensive written documentation on the project is required. Students are assigned in groups to a project supervisor. There are no lectures in this unit, although students will be expected to attend regular meetings with their project supervisor.
The unit is the second part of a 12-credit point project sequence; the first part and entry point for the project is FIT3161.

Mode of delivery

Malaysia (On-campus)
Clayton (On-campus)

Workload requirements

Minimum total expected workload equals 12 hours per week comprising:

(a.) Contact hours for on-campus students:
- 2-hour project meeting and peer-learning session per week in a lab environment.
- 2-hour guest lectures and peer presentations in seminars.

(b.) Additional requirements (all students):
- A minimum of 8 hours of personal study in order to complete the research and implementation of the project.

Unit relationships

Prerequisites

FIT3161

Prohibitions

FIT3144

Co-requisites

None

Chief Examiner

Dr Marc Cheong

Campus Lecturer(s)

Clayton

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Malaysia

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Tutor(s)

Clayton

Name: Daniel Jitnah

Malaysia

Name: Muhammad Fermi Pasha

Academic overview

Learning outcomes

On completion of this unit, students should be able to:

1. evaluate and select research methods and techniques of data collection and analysis appropriate to a particular project;
2. search, access, and analyse research literature as part of the process of developing solutions to problems;
3. work effectively in collaborative teams;
4. develop and test a substantial piece of software or hardware;
5. explain and reflect upon the purpose, operation, success and value of the developed project in writing and orally;
6. write a report explaining methodology, outlining their contributions and the contributions of others, and documenting the developed project from appropriate perspectives, for instance that of a user, researcher or developer.

Teaching approach

Problem-based learning

Students (in pair teams) who have completed the initial planning and research in FIT3161 are now required to fully implement their computer science project. Students are encouraged to take responsibility for organising and directing their learning with support from their supervisors.

Seminars

Students will also be introduced to various aspects of computer science research and project development in seminars run by guest lecturers.

Assessment summary

In-semester assessment: 100%

Assessment task	Value	Due date
Weekly Workbook (Mahara, individual)	10%	Deadline for entire compiled Workbook - Friday 5pm of Week 12.
Interim Presentation	5%	During scheduled activities in Week 5 and 6.
Final Presentation	10%	During scheduled activities in Week 11 and 12.
Final Software/Code Deliverables	20%	Friday 5pm of Week 12.
Testing/Quality Assurance and Evaluation Report	15%	Friday 5pm of Week 12.
Final Report	40%	Friday 5pm of Week 12.

Unit schedule

For units with on-campus classes, teaching activities are normally scheduled to start on the hour (teaching will commence on the hour and conclude 10 minutes prior to the scheduled end time).

Week	Activities	Assessment
0		No formal assessment or activities are undertaken in week 0.
1	Introduction to FIT3162 and t ransitioning from FIT3161. Preliminaries including development environment setup, evaluation (and revision if needed) of prior project management plan.	Continual assessment: Weekly Workbook (Mahara) to be assessed on an ongoing basis from Week 1 to 12 inclusive, taking into consideration active weekly participation and attendance to scheduled activities especially workshops.
2	**Workshops (labs): weekly implementation, development, and supervision meetings in class.** This activity is repeated on a weekly basis - students will be implementing their project (including coding and write-ups) weekly in the lab classes, while being supervised by their respective project supervisor (lecturer) and tutor. Activities such as consultation, group discussion, brainstorming sessions, progress checks, informal interviews, etc. will take place in the weekly sessions and such activities will be made known on Moodle on a project-by-project basis. **Seminars: guest lecturers** will be presenting seminars/lectures on computer science, research and development (tba based on guest lecturer availability).	
3	As per Week 2 - please see above.	
4	As per Week 2 - please see above.	
5	Interim Presentation	Interim Presentation conducted in seminar time slot for Week 5 and 6.
6	Interim Presentation	Interim Presentation conducted in seminar time slot for Week 5 and 6.
7	As per Week 2 - please see above.	
8	As per Week 2 - please see above.	

Week	Activities	Assessment
9	As per Week 2 - please see above.	
10	As per Week 2 - please see above.	
11	Final Presentation	Final Presentation conducted in seminar time slot in Week 11 and 12.
12	Final Presentation	Final Presentation conducted in seminar time slot in Week 11 and 12. Final Software/Code Deliverables + Testing /Quality Assurance and Evaluation Report + Final Report + Weekly Workbook - due Friday 5pm of Week 12.
	SWOT VAC	No formal assessment is undertaken in SWOT VAC.

Assessment requirements

Faculty Unit Assessment Pass Policy

To pass a unit which includes an examination as part of the assessment, a student must obtain, unless otherwise approved and published:

- 40% or more in the unit's examination, and
- 40% or more in the unit's total non-examination assessment, and
- an overall unit mark of 50% or more.

For units with 100% in-semester assessment, there is a 40% pass rate required for each major assessment item (i.e. items worth 20% or more) in order to pass the unit.

If a student does not achieve 40% or more in the unit examination or the unit non-examination total assessment, or 40% or more for each major assessment item where there is 100% in-semester assessment, and the total mark for the unit is:

- equal to or greater than 50%, then a mark of 49-N will be recorded for the unit.
- less than 50% then the actual mark for the unit will be recorded.

Participation

ULO 1,3,4,5,6.

Students must contribute equally with their team partner.
Students who are found to have contributed in a non-equitable fashion may have their final marks adjusted based on actual contribution; this is to be judged on a case-by-case basis involving formal interviews and evidence (including Weekly Workbook, timestamps and activity logs, etc.)

Assessment tasks

Assessment title: Weekly Workbook (Mahara, individual)

Learning outcomes: ULO 1,3,4,5,6.

Details of task: Students are required to actively participate in weekly Workshops and Seminars to promote peer-learning, expert-led learning, and to obtain feedback from their respective project supervisors.

A Mahara Portfolio needs to be created, containing weekly entries describing what has been accomplished through the week (progress/contributions/weekly performance, etc). The workbook needs to have sufficient detail on tasks undertaken, critical reflections on the project, as well as cognisance of the assigned roles/tasks for each member of a project team. This workbook is used as evidence to ensure each team member contributes equally to the project.

Value: 10%

Hurdle requirements: N/A

Individual assessment in group tasks: N/A

Criteria for marking: Active attendance and participation in weekly scheduled activities and completeness of workbook.

Due date: Deadline for entire compiled Workbook - Friday 5pm of Week 12.

Estimated return date: Continuous weekly feedback.

Additional information: N/A

Assessment title: Interim Presentation

Learning outcomes: ULO 3,4,5.

Details of task: An interim presentation in Week 5/6 to an academic audience, focusing on the progress made to date, challenges encountered/anticipated, as well as discussion and to obtain early feedback on their final project.

Value: 5%

Hurdle requirements: N/A

Individual assessment in group tasks: Students in a team are to be awarded the same mark.

Students who are found to have contributed in a non-equitable fashion may have their final marks adjusted based on actual contribution; this is to be judged on a case-by-case basis involving formal interviews and evidence (including Weekly Workbook, timestamps and activity logs, etc.)

Criteria for marking:

- Quality of presentation,
- skills on presenting research and project status to a wider audience,
- ability to engage with questions, and
- feedback from the audience.

All the team members must be present during the presentation.

Due date: During scheduled activities in Week 5 and 6.

Estimated return date: Marked on the spot.

Additional information: N/A

Assessment title: Final Presentation

Learning outcomes: ULO 3,4,5.

Details of task: A final presentation in Week 11/12 to an academic audience, focusing on the final deliverables of the project. This includes, but not limited to, the key findings of the project, a demonstration of the final software product, as well as a post-mortem discussion on their project as a whole.

Value: 10%

Hurdle requirements: N/A

Individual assessment in group tasks: Students in a team are to be awarded the same mark.

Students who are found to have contributed in a non-equitable fashion may have their final marks adjusted based on actual contribution; this is to be judged on a case-by-case basis involving formal interviews and evidence (including Weekly Workbook, timestamps and activity logs, etc.)

Criteria for marking:

- Quality of presentation and demo,
- skills on presenting research and project outcomes to a wider audience,
- ability to engage with questions, and

- feedback from the audience.

All the team members must be present during the presentation.

Due date: During scheduled activities in Week 11 and 12.

Estimated return date: Marked on the spot.

Additional information: N/A

Assessment title: Final Software/Code Deliverables

Learning outcomes: ULO 1,2,3,4.

Details of task: Implementation of the solution to the research project as a ready-to-use software package/prototype, in accordance with the original project specification provided, as well as the proposal developed by the students in FIT3161.

Students will have to be able to demonstrate a working implementation to the Lecturer/Tutor, to avoid incompatibility issues with hardware/software/platform combinations.

Value: 20%

Hurdle requirements: N/A

Individual assessment in group tasks: Students in a team are to be awarded the same mark.

Students who are found to have contributed in a non-equitable fashion may have their final marks adjusted based on actual contribution; this is to be judged on a case-by-case basis involving formal interviews and evidence (including Weekly Workbook, timestamps and activity logs, etc.)

Criteria for marking:

- The correctness of the implementation,
- quality of code,
- good programming practices,
- evidence of good design and quality assurance,
- quality of the user interface.

Code demonstration during the lab classes in Week 11 and 12.

Due date: Friday 5pm of Week 12.

Estimated return date: No later than week 14.

Additional information: N/A

Assessment title: Testing/Quality Assurance and Evaluation Report

Learning outcomes: ULO 3,4,5,6.

Details of task: Report detailing quality assurance (QA) and test procedures, parameters and outcomes of testing, as well as evaluation of the data/results (if applicable, e.g. quality metrics or statistics).

Value: 15%

Hurdle requirements: N/A

Individual assessment in group tasks: Students in a team are to be awarded the same mark.

Students who are found to have contributed in a non-equitable fashion may have their final marks adjusted based on actual contribution; this is to be judged on a case-by-case basis involving formal interviews and evidence (including Weekly Workbook, timestamps and activity logs, etc.)

Criteria for marking:

- Completeness of report,
- evidence of sufficient testing,
- reproducibility of test cases,
- good software verification & validation practices,
- correct evaluation procedures for the quality of data/results.

Due date: Friday 5pm of Week 12.

Estimated return date: No later than Week 14.

Additional information: N/A

Assessment title: Final Report

Learning outcomes: ULO 1,2,3,5,6.

Details of task: The final report is a formal academic paper which provides a complete description of the project, relevant background, methodology, results, interpretation of the results, analysis and

discussion on limitations, and future work. Any issues including challenges, modifications to the original plan, project management considerations, etc. are to be included. This report to be professionally presented with adequate and correct referencing skills.

Value: 40%

Hurdle requirements: N/A

Individual assessment in group tasks: Students in a team are to be awarded the same mark.

Students who are found to have contributed in a non-equitable fashion may have their final marks adjusted based on actual contribution; this is to be judged on a case-by-case basis involving formal interviews and evidence (including Weekly Workbook, timestamps and activity logs, etc.)

Criteria for marking:

- Clarity, organisation and completeness of the report.
- Significant factors include, but not limited to:
    - the quality of the interpretation and analysis of the results, as well as
    - the use of relevant research literature,
    - professional presentation of the final report,
    - evidence of original research contributions,
    - the honest appraisal of the overall project and its logistics,
    - evidence of critical thinking.

Due date: Friday 5pm of Week 12.

Estimated return date: No later than week 14.

Additional information: N/A

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 lecturer via the in-semester special consideration process: http://www.monash.edu.au/exams/special-consideration.html

Late submissions to any deliverables will incur a penalty of up to 10% of the maximum mark per day late or part thereof.

Returning assignments

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

Referencing requirements

To build your skills in citing and referencing, and using different referencing styles, see the online tutorial Academic Integrity: Demystifying Citing and Referencing at http://www.lib.monash.edu/tutorials/citing/

Additional information:
Complete, **correct**, and **consistent** referencing must be adhered to. It is recommended that students use either the IEEE, MLA, Harvard, or APA formats (as discussed with their supervisor) **consistently** throughout their project. Failure to adhere to proper referencing requirements will result in penalties.

Assignment submission

It is a University requirement (http://www.policy.monash.edu/policy-bank/academic/education/conduct/student-academic-integrity-managing-plagiarism-collusion-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 electronic submission).

Please note:

1. **It is your responsibility to retain copies of your assessments.**
2. **Assessments submitted without an assignment coversheet will not be marked.**

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.

To check for plagiarism, copies of ALL written deliverables must be uploaded to Moodle, and the supervisors/lecturers reserve the right to use Turnitin, MOSS, and other plagiarism checker services.

Please keep a copy of tasks completed for your records.

Feedback to you

☑ Informal feedback on progress in labs/tutes
☑ Graded assignments with comments
☑ Graded assignments without comments
☑ Interviews

Learning resources

Learning resources, including project specifications and project reading material, will be provided by the lecturers on Moodle. In addition, any research papers pertaining to the project will be available from the Monash Library.

Monash Library Unit Reading List (if applicable to the unit): http://monash.rl.talis.com/index.html
Research and Learning Online: www.monash.edu/rlo

Required resources

Students generally must be able to complete the requirements of their course without the imposition of fees that are additional to the student contribution amount or tuition fees. However, students may be charged certain incidental fees or be expected to make certain purchases to support their study. For more information about this, refer to the Higher Education Administrative Information for Providers, Chapter 18, Incidental Fees at http://education.gov.au/help-resources-providers.

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.

Additional information:
Learning resources, including project specifications and project reading material, will be provided by the lecturers on Moodle. In addition, any research papers pertaining to the project will be available from the Monash Library.

Technological requirements

Students must regularly check Moodle for announcements. Software for coding and implementation of the project are freely available / downloadable in student labs.

Recommended resources

Learning resources, including project specifications and project reading material, will be provided by the lecturers on Moodle. In addition, any research papers pertaining to the project will be available from the Monash Library.

Your feedback to us

The Student Evaluation of Teaching and Units (SETU) is a survey in which students are able to rate their satisfaction of their units and teaching staff.

This is a new unit and your feedback on the unit will provide faculties with an insight into your learning journey and how the unit, course and teaching staff can be enhanced in future teaching periods.

If you would like to know more about SETU, please go to: www.monash.edu/ups/setu

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

Student Academic Integrity Policy

www.monash.edu/__data/assets/pdf_file/0004/801841/Student-Academic-Integrity-Policy.pdf

Special Consideration

For information on applying for special consideration, please visit: http://www.monash.edu/exams/changes/special-consideration

Graduate Attributes Policy

http://www.monash.edu/__data/assets/pdf_file/0009/786969/Course-Design-Policy.pdf

Student Charter

http://www.monash.edu/students/policies/student-charter.html

Student Services

The University provides many different kinds of services to help you gain the most from your studies. Contact your tutor if you need advice and see the range of services available at http://www.monash.edu/students.

For Malaysia 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 http://www.monash.edu/library or the library tab in my.monash portal for more information.

At Malaysia visit the Library and Learning Commons at http://www.lib.monash.edu.my/.

At South Africa visit http://www.lib.monash.ac.za/.

Disability Support Services

Students who have a disability, ongoing medical or mental health condition are welcome to contact Disability Support Services.

Disability Support Services also support students who are carers of a person who is aged and frail or has a disability, medical condition or mental health condition.

Disability Advisers visit all Victorian campuses on a regular basis.

- Website: monash.edu/disability
- Telephone: 03 9905 5704 to book an appointment with an Adviser, or contact the Student Advisor, Student Community Services at 03 55146018 at Malaysia
- Email: disabilitysupportservices@monash.edu
- Drop In: Level 1, Western Annexe, 21 Chancellors Walk (Campus Centre) Clayton Campus, or Student Community Services Department, Level 2, Building 2, Monash University, Malaysia Campus

Malaysia General Studies Unit - U4 cluster

This unit has been approved as a General Studies (GS) unit under the U4 cluster by the Malaysian Qualifications Agency (MQA). The objective of the U4 cluster is to produce students who can apply soft skills. A range of learning outcomes have been developed by the Ministry of Higher Education (MOHE) for the U4 cluster. The U4 cluster learning outcomes are:

1. apply social skills and responsibility;
2. apply values, attitudes and professionalism;
3. apply communication and leadership skills and the ability to work in teams;
4. apply information management and lifelong learning skills;
5. apply management and entrepreneurial skills.

The units provided by Monash University Malaysia which are approved under the U4 cluster provide students with the opportunity to address these learning outcomes from different perspectives and using a range of different approaches.

Mapping of Unit Learning Outcomes to U4 Cluster GS Learning Outcomes

	ULO1	ULO2	ULO3	ULO4	ULO5	ULO6
GS LO1						
GS LO2						
GS LO3			✓			✓
GS LO4	✓	✓			✓	
GS LO5					✓	✓