KXC351 Software Engineering Project A

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Hangzhou, China

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Lecturing Staff
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UNIT OVERVIEW

Introduction

The project course aims to provide students with the experience of developing a medium-scale computing project in a small team. This unit provides students with the experience of working in a team and dealing with the associated problems of communication and team management.

A more detailed description of the unit is contained in the 'Project Manual' (available on the unit website).

Prerequisites

Any two: KXC251 KXC252 KXC253 KXC254 KXC262 KXC281

Unit Weight

12.5% of one academic year

Learning expectations

The University is committed to high standards of professional conduct in all activities, and holds its commitment and responsibilities to its students as being of paramount importance. Likewise, it holds expectations about the responsibilities students have as they pursue their studies within the special environment the University offers. The University's Code of Conduct for Teaching and Learning states:

Students are expected to participate actively and positively in the teaching/learning environment. They must attend classes when and as required, strive to maintain steady progress within the subject or unit framework, comply with workload expectations, and submit required work on time.

Attendance/performance requirements and teaching and learning strategies

No attendance/performance requirements specified.

Communication

No communication specified.

Teaching Pattern

4-hour lectures in weeks 1 and 2, 2-hour lectures in weeks 4 and 10. Management meetings in weeks 3, 6, 9, and 12. Presentations in week 13.

Unit Content

Software Engineering Project provides students with the experience of developing a medium-scale computing project in a small team. All aspects of the development process will be considered: problem specification, requirement extraction, system design, implementation, testing and documentation. The units provide students with the experience of working in a team and dealing with the associated problems of communication and team management.

In the first two years of your degree you learn a great deal of theory about software engineering but practical experience is limited to artificial assignments. Software Engineering Project allows you to apply this theoretical knowledge on a real-world project so that you will be able to transfer to industry easily.

The software engineering project is broken into two units, KXC351 Project A and KXC352 Project B, which must be completed over consecutive semesters. Students work on the same project in both units, unless circumstances prevent this.

Each student is placed into a project team of 5 students. A team of three or four may be necessary due to class size. Each team then chooses a project from the list available. Each project has a real client.

In Project A you complete release 1 (or a third of the project), you do the remaining two thirds in Project B. In Project A you are expected to work to the supplied schedule, and have regular meetings/lectures with the lecturer.

A more detailed description of the unit is contained in the 'Project Manual' (available on the unit website).

For more information see the section titled 'Content' on the unit website.

Learning Outcomes
On successful completion of this unit, you will be able to:

1. Question a client to extract and analyse the software requirements and present the analysis in a written report while working in a team;
2. (having analysed the requirements) Prepare appropriate design documents while working in a team;
3. (having prepared design documents) Construct and integrate a significant software system while working in a team;
4. (having developed a software system) Construct promotional material as a team;
5. (having developed a software system) Produce written technical and instructive documentation on the implemented solution;
6. Orally present and demonstrate the software system to staff and industry representatives while working as a team;
7. Evaluate in writing the quality of reports or software developed by another team;
8. Formulate a schedule for a team of people and individually and collectively manage your time;
9. Work in a small team with a client, acting professionally and planning effectively and be able to evaluate your own and peers' performance at team and individual activities.

Generic graduate attributes

Successful completion of this unit supports your development of course learning outcomes, which describe what a graduate of a course knows, understands and is able to do. The course learning outcomes for all the ICT degrees can be found via: http://www.utas.edu.au/ict/new-courses. Course learning outcomes are developed with reference to national discipline standards, Australian Qualifications Framework (AQF), any professional accreditation requirements and the University of Tasmania’s Graduate Quality Statement.

The University of Tasmania experience unlocks the potential of individuals. Our graduates are equipped and inspired to shape and respond to the opportunities and challenges of the future as accomplished communicators, highly regarded professionals and culturally competent citizens in local, national, and global society. University of Tasmania graduates acquire subject and multidisciplinary knowledge and skills and develop creative and critical literacies and skills of inquiry. Our graduates recognise and critically evaluate issues of social responsibility, ethical conduct and sustainability. Through respect for diversity and by working in individual and collaborative ways, our graduates reflect the values of the University of Tasmania.

These are the generic skills that you should be developing in this unit.

Knowledge

1. Apply previous software development knowledge and independently learn new skills to build a software system according to client requirements and deadlines;
2. Investigate and overcome issues and challenges associated with constructing a substantial piece of software;
3. Develop research skills to identify and use appropriate software development tools and other resources.

Communication Skills

1. Develop the ability to extract requirements from a client, analyse and organise the information and formulate ideas and to communicate all the information and ideas effectively and fluently, in both written and oral forms using communication technologies as appropriate.

Problem-solving

1. Apply problem-solving skills to develop a practical solution to a non-trivial computing project;
2. Ability to interact effectively with others in order to work towards a common outcome;

Global Perspective

1. Demonstrate mastery of skills appropriate to professional practice in preparation for the transition to an IT working environment;
2. Recognise the critical importance of the field of project management in the development of software systems;
3. Ability to interact with members of the Tasmanian IT industry.

Alterations to the unit as a result of student feedback
UNIT ASSESSMENT

Assessment Pattern

Team Component (60%), Individual Component (40%)

Assessment Summary

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project - team component</td>
<td>60%</td>
<td>As specified in the Project Manual.</td>
</tr>
<tr>
<td>Project - individual component</td>
<td>40%</td>
<td>As specified in the Project Manual.</td>
</tr>
</tbody>
</table>

Assessment Items

Item 1
Title: Project - team component
Type: In-Semester - group project
Task Length: not applicable
Weighting: 60%
Links to Learning Outcomes: ALL
Due: As specified in the Project Manual.
How To submit:
Description: The team component is made up of: 20% Design, 20% Software, 5% Professionalism, 5% PSP and 10% Marketing. Each person in the team will get the same mark for the team component, so it is very important that you all work as a team and contribute to the best of your ability. The assessment is fully described in the Project Manual.

Item 2
Title: Project - individual component
Type: In-Semester - group project
Task Length: not applicable
Weighting: 40%
Links to Learning Outcomes: ALL
Due: As specified in the Project Manual.
How To submit:
Description: The individual component is made up of: 10% Design, 10% Software, 5% Professionalism, 10% PSP, and 5% Marketing. The assessment is fully described in the Project Manual.

See the 'Assessment' section in unit website for more detailed information about assessment items.

How your Final Grade will be determined

Overall assessment will be based on the student's performance throughout the semester. In order to achieve a pass (or better) result, a student must obtain:
- at least 45% of the mark for the team component
- at least 45% of the mark for the individual component
- at least 50% of the overall mark

Attendance Requirements

It is a requirement of your Chinese university that you attend all classes. UTAS supports this principle. It is our belief that attendance in class leads to better engagement with the subject matter and therefore to better results. Please attend all classes.
UNIT RESOURCES

Unit Web Site

This unit is Web Supplemented. This means that the use of the Web is optional for this unit. The unit website contains unit information and resources. The unit website is accessed from http://www.utas.edu.au/coursesonline/. You will need to use your University of Tasmania email pop account username and password to log on to the MyLO system. Once authenticated by the system your personalised MyLO Learning Online area will be displayed. It contains links to the websites that you have permission to access - including the website for this unit. If you are not able to access the unit website, please contact the technical staff at ZUT.

Prescribed Text

None

Readings


Software

The software that you will need to access the unit website and to study this unit, including general purpose software such as word processors, is provided on the computers in the computing labs. If you intend to use software on other computers please check that the versions are compatible. The software that you will need to use is dependent on which project you undertake.
GENERAL RESOURCES

School Website

Discipline of ICT, School of Engineering and ICT - Faculty of Science, Engineering, and Technology.
http://www.utas.edu.au/ict

Faculty Website

Information and Resources for Faculty of Science, Engineering and Technology students are available on the faculty website at: http://www.utas.edu.au/scieng

University Website

Information and Resources for 'Current Students' are available on the university website at: http://www.utas.edu.au/students/

School Help Desk

Contact technical staff at ZUT for information about accessing and using the Computer labs.
**GENERAL ASSESSMENT**

**Approach to Learning**

The University is committed to high standards of professional conduct in all activities, and holds its commitment and responsibilities to its students as being of paramount importance. Likewise, it holds expectations about the responsibilities students have as they pursue their studies within the special environment the University offers.

The University’s Code of Conduct for Teaching and Learning states:

> Students are expected to participate actively and positively in the teaching/learning environment. They must attend classes when and as required, strive to maintain steady progress within the subject or unit framework, comply with workload expectations, and submit required work on time.

You are expected to spend about 130 hrs studying in this unit - this includes attendance at scheduled teaching sessions. (For a 13 week semester this is, on average, 10 hr/wk.) This is the amount of study time that the 'typical' student will need to reach the level of competence and understanding required to fulfil the unit objectives. You are expected to:

- attend all scheduled teaching sessions, unless otherwise notified by the unit coordinator
- prepare for, and actively participate in all scheduled teaching sessions
- complete the assigned learning tasks
- review what has been learnt
- complete assessment items and submit them on time
- access and be familiar with the information and resources available on the unit website
- seek help from teaching staff if you have any questions or difficulties in studying this unit

You are encouraged to read the university’s Code of Conduct for Teaching and Learning. Part A describes the 'Responsibility of the University to Students' and part B describes the 'Responsibilities of Students to the University'.


It is expected that students will familiarise themselves with access and use of the MyLO system operated by the University for the electronic delivery of course materials, and for various forms of communication.

It is expected that students will consult email sent to their University email address at least twice a week for notices relating to the administration of the unit, and for notification of the results of assignments.

It is expected that students will read the background material specified in the course curriculum, will actively attend and participate in tutorials, and be prepared to discuss relevant issues arising with tutors, lecturers and fellow students.

**Student Expectations of the Unit**

Students enrolled in this Unit may reasonably expect the following:

1. To be able to contact a lecturer or tutor by electronic mail, to raise issues arising in the unit, either relating to content or student performance within the unit.
2. Subject to availability, to be able to discuss such issues in person with the lecturer or tutor.
3. That assignments will be marked and the marks will normally be returned within 3 weeks of due dates.
4. That all relevant notices regarding the administration of the unit, including any necessary changes, will be communicated to all students enrolled in the unit via email.

*These expectations are in addition to those specified in relevant University regulations.*
Plagiarism

In your written work you will need to support your ideas by referring to scholarly literature, works of art and/or inventions. It is important that you understand how to correctly refer to the work of others, and how to maintain academic integrity. Failure to appropriately acknowledge the ideas of others constitutes academic dishonesty (plagiarism), a matter considered by the University of Tasmania as a serious offence.

Unless specifically stated in the specification of the assessment item provided on the unit website, it is required that:

- work submitted by a student is the work of that student alone OR
- where the assessment item is to be completed by a group of students, the work submitted by the group of students is the work of that group of students alone.

While students are encouraged to discuss the assignments in this unit and to engage in active learning from each other, it is important that they are also aware of the University's policy on plagiarism. Plagiarism is taking and using someone else's thoughts, writings or inventions and representing them as your own; for example downloading an essay wholly or in part from the internet, copying another student’s work or using an author's words or ideas without citing the source.

“Plagiarism is a form of cheating. It is taking and using someone else's thoughts, writings or inventions and representing them as your own; for example, using an author’s words without putting them in quotation marks and citing the source, using an author’s ideas without proper acknowledgment and citation, copying another student’s work.

If you have any doubts about how to refer to the work of others in your assignments, please consult your lecturer or tutor for relevant referencing guidelines. You may also find the Academic Honesty site on MyLO of some assistance.

The intentional copying of someone else's work as one's own is a serious offence punishable by penalties that may range from a fine or deduction/cancellation of marks and, in the most serious of cases, to exclusion from a unit, a course or the University. Details of penalties that can be imposed are available in the Ordinance of Student Discipline - Part 3 Academic Misconduct, see http://www.utas.edu.au/__data/assets/pdf_file/0006/23991/ord91.pdf.

The University and any persons authorised by the University may submit your assessable works to a plagiarism checking service, to obtain a report on possible instances of plagiarism. Assessable works may also be included in a reference database. It is a condition of this arrangement that the original author’s permission is required before a work within the database can be viewed.”

It is important that you understand this statement on plagiarism. Should you require clarification please see your unit coordinator or lecturer. Useful resources on academic integrity, including what it is and how to maintain it, are also available at: http://www.academicintegrity.utas.edu.au

Academic misconduct

Academic misconduct includes cheating, plagiarism, allowing another student to copy work for an assignment or an examination, and any other conduct by which a student:

a. seeks to gain, for themselves or for any other person, any academic advantage or advancement to which they or that other person are not entitled; or

b. improperly disadvantages any other student.

Students engaging in any form of academic misconduct may be dealt with under the Ordinance of Student Discipline, and this can include imposition of penalties that range from a deduction/cancellation of marks to exclusion from a unit or the University. Details of penalties that can be imposed are available in Ordinance 9: Student Discipline http://www.utas.edu.au/__data/assets/pdf_file/0006/23991/Ordinance-9-Student-Discipline.pdf - Part 3 Academic Misconduct.

Referencing

The preferred text referencing systems for the School is the Harvard system (also referred to as the author-date system). In your written work you will need to support your ideas by referring to scholarly literature, works of art and/or inventions. The University library provides information on presentation of assignments, including referencing styles and should be referred to when completing tasks in this unit. For information on presentation of assignments,
It is important that you understand how to correctly refer to the work of others and maintain academic integrity. Failure to appropriately acknowledge the ideas of others constitutes academic dishonesty (plagiarism), a matter considered by the University of Tasmania as a serious offence. The university document on plagiarism contains information about referencing the work or ideas of others (see http://www.utas.edu.au/plagiarism/).
Submissions

The details of the submission method (paper, electronic or other) for each assignment will be supplied in a separate assignment specification sheet. All in-semester assignment submissions (including electronic submissions) are to include an Assignment Cover Sheet which includes a statement confirming that the submission is your own work. If this undertaking is not signed, the assignment will not be marked. The Assignment Cover Sheet is available on the Discipline’s web site http://www.utas.edu.au/ict/resources.

Extensions

Assessment items will not be accepted after the due date except under the conditions stated in the Discipline policy on late assessment. http://www.utas.edu.au/__data/assets/pdf_file/0003/231960/ExtensionPolicy.pdf (PDF - 100KB).

Review of Assessment and Appeals

1. It is expected that students will adhere to the following policy for review of any piece of continuous assessment.
   a. Within 5 days of the release of the assessment result, the student should request an appointment with the Lecturer. The student should be prepared to discuss specifically which section of the marking criteria they are disputing and why they consider the mark is inappropriate.
   b. Following this discussion, students may request a formal remark of the original submission (in accordance with Rule of Academic Assessment 111, clause 22.1). This remark will be undertaken, where practicable, by an alternative assessor.
2. Students may also request a review of the final result in a unit. The request and payment must be made within 10 days from the date of the result notification. Students are referred to Rule of Academic Assessment 111, clause 23 at http://www.utas.edu.au/university-council/university-governance/rules and http://www.studentcentre.utas.edu.au/examinations_and_results/results/result_review_results.htm.

Complaints Procedure

It is expected that students will adhere to the following policy for making any complaint or grievance directly related to a Unit:
   a. In the first instance, students are to approach the Lecturer or Unit Coordinator concerned and arrange a time to speak with them about their concern.
   b. If an issue remains unresolved, the student should approach the Head of School and arrange a time to speak with them about their concern.

If the School's internal policy of complaints is unable to resolve an issue, students should consult Ordinance 8 Student Complaints for further direction, see http://acserv.admin.utas.edu.au/complaints_info.html

Final Grade

Passing grades will be awarded based on the AVCC guidelines:

- PP at least 50% of the overall mark but less than 60%
- CR at least 60% of the overall mark but less than 70%
- DN at least 70% of the overall mark but less than 80%
- HD at least 80% of the overall mark

In order to comply with the benchmarks set by the Faculty of Science, Engineering & Technology for distribution of grades in units, both the in-semester and examination marks that students obtain may be adjusted either upwards or downwards. See http://fcms.lts.utas.edu.au/scieng/scieng/policies.asp for details of the Faculty Assessment Guidelines.

Further information and assistance

If you are experiencing difficulties with your studies or assignments, have personal or life-planning issues, disability or illness which may affect your course of study, you are advised to raise these with the unit coordinator in the first instance.

There is a range of University-wide support services available to you including Student Learning Support (http://www.utas.edu.au/student-learning/), Student Advisers (http://www.utas.edu.au/first-year/student-advisers), Disability Services (http://www.utas.edu.au/students/disability/students), and more which can be found on the Student Support and Development page (http://www.utas.edu.au/students/students/support-development) of the University website.

Should you require assistance in accessing the Library, visit their website (http://www.utas.edu.au/library/study) for more information.