School of Computing and Information Systems

Unit Outline

KXO202 Systems Development Methodologies

March - July 2010
Shanghai, China

Unit Coordinator

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UNIT OVERVIEW

Introduction

This is a compulsory unit within the Bachelor of Information Systems Degree. An understanding of systems development methodologies is central to Information Systems. The unit is designed to lead to the ability to analyse an organisational context to determine the need for a systems development methodology, and then to be able to select an appropriate methodology.

Prerequisites

BSA201 or KXI201 or KXO201

Unit Weight

12.5% of one academic year

Teaching Pattern

Workshops: 2 hours per week
Completion of weekly readings available online, participating in group MyLO discussions of issues related to online readings

Unit Content

<table>
<thead>
<tr>
<th>Focus of Online Readings and Supporting MyLO Small Group Discussions</th>
<th>Format</th>
<th>Topic of Lecture or Workshop</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1 Introduction to KXO202</td>
<td>Lecture</td>
<td>Overview of the unit</td>
</tr>
<tr>
<td>Week 1 Need for systems development methodologies; introduction to systems development methodologies</td>
<td>Workshop 1</td>
<td>Reviewing unit outline; groupwork strategies: organisational versus technical systems development issues</td>
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<tr>
<td>Week 2 Themes in systems development</td>
<td>Workshop 2</td>
<td>Organising MyLO discussion groups; systems thinking; preview of Assignment 1</td>
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<tr>
<td>Week 3 The traditional systems development life cycle as an early systems development methodology</td>
<td>Workshop 3</td>
<td>Application of approaches of systems development to a case study</td>
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<tr>
<td>Week 4 Techniques for systems development</td>
<td>Workshop 4</td>
<td>SSM modelling techniques</td>
</tr>
<tr>
<td>Week 5 Tools for systems development;</td>
<td>Workshop 5</td>
<td><strong>IN LAB</strong> SSM modelling techniques (continued); use of</td>
</tr>
</tbody>
</table>
Lesson Plan

<table>
<thead>
<tr>
<th>Component</th>
<th>Workshop</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 6 Organisational-oriented methodologies including Soft Systems Methodology</td>
<td>Workshop 6</td>
<td>Development of an implementation plan; preview of Assignment 2</td>
</tr>
<tr>
<td>Assignment 1 due Monday, 19th April, at 11.55pm</td>
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<tr>
<td>Week 7 Blended methodologies</td>
<td>Workshop 7</td>
<td>IN LAB CASE tools</td>
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<tr>
<td>Week 8 Process-oriented methodologies</td>
<td>Workshop 8</td>
<td>Identifying a systems development methodology appropriate for a case study</td>
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<tr>
<td>Week 9 Object-oriented methodologies; people-oriented methodologies</td>
<td>Workshop 9</td>
<td>IN LAB Systems to support OO/people-oriented methodologies</td>
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<tr>
<td>Week 10 Rapid development methodologies; alternatives to systems development</td>
<td>Workshop 10</td>
<td>IN LAB Systems to support rapid development methodologies</td>
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<tr>
<td>Assignment 2 due Monday, 24th May, at 11.55pm</td>
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<tr>
<td>Week 11 Content, philosophy &amp; purpose of methodologies; &quot;guest&quot; interview</td>
<td>Workshop 11</td>
<td>Overview of methodologies</td>
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<tr>
<td>Week 12 Methodology evaluations for appropriate choice to reduce systems failure; evaluation frameworks</td>
<td>Workshop 12</td>
<td>Completion &amp; review of past exam paper</td>
</tr>
<tr>
<td>Week 13 Unit review</td>
<td>Workshop 13</td>
<td>Unit review; responding to any questions; SETL</td>
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</tbody>
</table>

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. Have a knowledge of the process of developing information systems;
2. Understand the purpose of using systems development methodologies;
3. Be able to analyse an organisational context and need for a system development methodology;
4. Be able to select an appropriate systems development methodology to match an organisational context and need; and
5. Be able to use some popular tools and techniques associated with systems development methodologies.

Generic graduate attributes

The university has defined a set of generic graduate attributes expected in its graduates. 
http://www.utas.edu.au/policy/attributes_grads.pdf Your course is designed to enable you to develop generic skills that are valued in, and expected of, graduates. These are skills that you will need to develop over time. Hence you are encouraged to look for opportunities, as you study each unit, to reflect on and improve these skills.

UNIT ASSESSMENT

Assessment Pattern

Internal 60%, External Exam 40%

Assessment Summary

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
<th>Due Date</th>
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</thead>
<tbody>
<tr>
<td>Case Study: Applying Analysis Tools &amp; Techniques</td>
<td>20%</td>
<td>11:55pm Monday 19th April 2010</td>
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<tr>
<td>Case Study: Eval’n of Systems Devopment Methods</td>
<td>25%</td>
<td>11:55pm Monday 24th May 2010</td>
</tr>
<tr>
<td>On-Line weekly Group Discussion</td>
<td>15%</td>
<td>Weekly</td>
</tr>
<tr>
<td>Examination</td>
<td>40%</td>
<td>University Examination Period</td>
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</table>

Assessment Items

**Item 1**  
**Title:** Case Study: Applying Analysis Tools & Techniques  
**Type:** In-Semester - individual assignment  
**Task Length:** Approximately 2000 words  
**Weighting:** 20%  
**Links to Learning Outcomes:** 1, 2, 3, 4, 5  
**Due:** 11:55pm Monday 19th April 2010  
**Description:** A report incorporating the analysis and modelling of a systems development problem situation from a case study using Soft Systems Methodology (SSM) tools and techniques.
Item 2  
**Title:** Case Study: Eval’n of Systems Devopment Methods  
**Type:** In-Semester - individual assignment  
**Task Length:** Approximately 2500 words  
**Weighting:** 25%  
**Links to Learning Outcomes:** 1, 2, 3, 4, 5  
**Due:** 11:55pm Monday 24th May 2010  
**Description:** A report evaluating the appropriateness of two systems development methodologies for the development of an information system based on a case study.

Item 3  
**Title:** On-Line weekly Group Discussion  
**Type:** In-Semester - learning tasks  
**Task Length:** not applicable  
**Weighting:** 15%  
**Links to Learning Outcomes:** 1, 2, 3, 4, 5  
**Due:** Weekly  
**Description:** Weekly small group discussions on MyLO, responding to set issues. Each student will take turns in leading the group and reporting on the outcomes.

Item 4  
**Title:** Examination  
**Type:** Formal Examination  
**Task Length:** Two-hour written, closed-book examination  
**Weighting:** 40%  
**Links to Learning Outcomes:** 1, 2, 3, 4, 5  
**Due:** University Examination Period  
**Description:** Two-hour written, closed-book examination that assesses all intended learning outcomes, and represents 40% of the total unit assessment. A single A4 sheet (double sided) of hand-written notes may be taken in to the examination room and must be handed in with the examination paper.

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 as well as in a formal examination. In order to achieve a pass (or better) result, a student must obtain:

1. at least 45% of the total mark for in-semester assessment items  
2. at least 45% of the mark for the formal examination  
3. at least 50% of the overall mark

**UNIT RESOURCES**

**Unit Web Site**

This unit is Web Dependent: content & communication. This means that you will need to use the Web 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 SOU.

**Prescribed Text**


**Readings**


The learning resources available online will refer to passages from texts that are either compulsory or recommended reading.

**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.

**GENERAL RESOURCES**

**School Website**

School of Computing and Information Systems - Faculty of Science, Engineering, and Technology.  
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/

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
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, and the academic integrity resources on the web at http://www.academicintegrity.utas.edu.au.

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/universitycouncil/legislation/.

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

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. For information on presentation of assignments, including referencing styles: http://utas.libguides.com/referencing

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 School's web site http://www.cis.utas.edu.au/cisview/resources.jsp.

Extensions

Assessment items will not be accepted after the due date except under the conditions stated in the School policy on late assessment. http://www.cis.utas.edu.au/downloads/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/universitycouncil/legislation/rule111.pdf and http://www.admin.utas.edu.au/ac_serv/flowchart_review_assesment.pdf.

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

**Formal Examination**

The formal examination will be held at SOU, Shanghai, and is conducted by the University Registrar.

**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.its.utas.edu.au/scieng/scieng/policies.asp for details of the Faculty Assessment Guidelines.