Unit Outline

Business Process Analysis

INMT2235

Semester 1 2009
Crawley Campus

Dr Nick Letch

Business School
www.business.uwa.edu.au
Introduction

Information systems are a fundamental part of organisational infrastructure. In order to design, integrate and build effective information systems, it is necessary to thoroughly understand the business requirements for information and how information systems can be used in support of business processes.

In this unit you will be given the opportunity to learn the concepts and skills required to analyse, design and specify the requirements for efficient and effective information systems.

Learning outcomes

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

- Identify and analyse business information needs and develop a system development strategy
- Conduct a feasibility analysis of a systems development proposal and make a justified recommendation
- Prepare and use various information gathering techniques for eliciting user requirements and system expectations
- Describe major alternative methodologies used in developing information systems and the considerations involved in choosing a methodology
- Plan and manage an information systems specification project
- Construct and interpret a variety of system description documents, including physical and logical dataflow diagrams, entity-relationship diagrams, screen and report layouts
- Design efficient database tables and construct queries for required reports
- Make use of CASE software to generate system specification documents
- Communicate system specifications in both oral and written forms and present convincing arguments for design decision

Contact Details

Lecturer/ Unit Coordinator
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phone: 6488 3741
Consultation Times: Available most days by appointment

Tutor
Name: Mr Raymond Chen
Email: raychen75@gmail.com

We strongly advise students to regularly access their student email accounts. Important information regarding the unit is often communicated by email and will not be automatically forwarded to private email addresses.
Prerequisites

This unit assumes that students have already developed certain basic skills. It is expected that students have an adequate command of:

1. English and related communication skills – students are expected to understand and follow the principles of accepted expression and style.
2. Basic mathematical and statistical skills – students are expected to possess basic numerical skills
3. Library research skills

If you are not well prepared in any of the above areas you should make every effort to remedy the situation through undertaking additional reading and/or practice. Do not hesitate to ask for advice from your tutor.

Unit-specific prerequisites

This unit requires that students have successfully completed INMT1103 Information, Technology and Systems or an equivalent unit.

Technical requirements

Students should have access to a personal computer with word processing, spreadsheet and database facilities (eg. Microsoft Office products). Access to the Internet and basic web publishing ability is also desirable.

Software requirements

It is expected that you are proficient in using word processing and spreadsheet software. In the course of this unit you will may be required to make use of the specialised software such as

Visual Architect; Visible Analyst; MS-Project; MS-Access

Sufficient instruction in the use of software products will be provided to enable you to complete exercises and some of your assigned work. However, proficiency in the use of these products is not assessed and these software packages are not the focus of this course.
Unit structure

The unit is divided into six modules:

A. The Information Systems Development Process  
B. Information Requirements Determination  
C. Information Systems Modelling  
D. Information Systems Design  
E. Information Systems Implementation  
F. Emerging issues in IS development

These modules will be taught over 13 weeks in 2 hour lectures. Two hours have been allocated for each laboratory session. Your tutor will be present for the first hour.

<table>
<thead>
<tr>
<th>Lecture</th>
<th>Monday 9:00-11:00</th>
<th>Arts Lecture Room 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tutorial/Laboratory</td>
<td>Monday 12:00-2:00</td>
<td>Comp Lab G.87</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Monday 2:00 – 4:00</td>
<td>Comp Lab G.87</td>
</tr>
</tbody>
</table>

Tutorial/Laboratory Sessions

During semester you will participate in weekly tutorial/laboratory sessions. Several of these sessions will make use of software to complete exercises in information systems analysis and design as well providing a forum for discussing topics covered in the lectures. Please note that the content and sequence of these sessions may vary. Please check WebCT regarding laboratory assignments and required submissions.

Unit WebCT site (http://webct.uwa.edu.au)

The Business Process Analysis WebCT site provides additional study resources and links to relevant web sites. You can also link to the Lectopia recordings of the lectures and the lecture powerpoint slides. Resources and materials will be added to the web site during the semester and you should regularly check this site for the latest information regarding the course.

Required Textbook


Additional resources and reading materials

Please refer to the WebCT site for this unit for additional handout readings, materials and web links.
Books available in the library

The following texts parallel your prescribed text and provide secondary sources for topics related to the systems analysis and design.


Demonstrates the use of techniques from soft systems methodology (including Rich Pictures and CATWOE analysis).

Assessment

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>WEIGHT (%)</th>
<th>DUE DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratory exercises/activities</td>
<td>10</td>
<td>Ongoing through the semester-check WebCT for submission dates</td>
</tr>
<tr>
<td>Tutorial /Laboratory Participation</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Assignment 1</td>
<td>10</td>
<td>17th April 12:00pm</td>
</tr>
<tr>
<td>Assignment 2 (Project review)</td>
<td>5</td>
<td>1st May 12:00pm</td>
</tr>
<tr>
<td>Assignment 2 (Final Report)</td>
<td>20</td>
<td>22 May 12:00pm</td>
</tr>
<tr>
<td>Final exam</td>
<td>50</td>
<td>TBA</td>
</tr>
</tbody>
</table>

Tutorial/laboratory exercises

During most weeks of the semester you will be assigned tutorial / laboratory exercises to complete. These exercises will sometimes require the use of specialist software to model aspects of information systems. You will be guided through the fundamental features and functions of these tools and then be asked to complete a specific exercise. You need to provide evidence that you have satisfactorily completed the weekly exercise in the following laboratory session. Each exercise is equally weighted. Please check WebCT for specific requirements and submission dates.

Assignment 1: Individual Assignment

This assignment assesses your knowledge of the preliminary phases of information systems development as well as your ability to apply that knowledge.

Due date: 17th April 12:00pm
Contributes 10% to overall mark

Your assignment will be made available to you during the second week of semester. You should submit your assignment via the WebCT submission system.

Assignment 2: Group Information Systems Analysis

In the major assignment you will work in teams of three or four to prepare an analysis and evaluation of an information system in an organisation of your choice. Based on your analysis you will need to make recommendations regarding future developments for this system.

In addition to assessing your ability to prepare a system specification document, marks will be allocated for project management skills. Consequently there are two submission dates

Project Review (5%) 1st May 12:00 hr
Final Project Submission (20%) 22nd May 12:00hr

Project Review (5%)

By the end of week nine you should have made substantial progress in your assignment. To ensure that your analysis and design is on track, the following deliverables will be reviewed:

- A brief outline of the organisation under analysis
- A statement of the project objectives and scope
- A list of proposed systems development deliverables and their planned completion dates.
- Draft context and level 0 DFDs
- Draft ERD

Final Report (20%)

The final report is due in week 12 and should take the general form of a written report to management. Depending on the scope of your study, your report may include deliverables such as:

- Situation/context analysis (including rich pictures)
- Project scope
- Constraint/opportunity analysis
- Existing/new logical dataflow diagrams
- Normalised data model
- Data dictionary
- Proposed system description and procedures (backup & recovery)
- Sample reports and input screens
- Development plan and costing
- Cost/benefit analyses

Your report will be assessed on the clarity of presentation, completeness of the documentation, evidence of innovative thought, and feasibility in the proposed design / recommendations.

Late Submissions

Late submission of assignments will be penalised at 10% per day
Final exam

The final 2 hour exam will cover all modules and topics that are outlined in the learning guide. Questions will be a mixture of short answer and problem-based case study. The format will be similar to those conducted in previous years. Past exam papers can be downloaded from the UWA library.
# Lecture and Tutorial/Laboratory Schedule

The following schedule may vary slightly during semester.

<table>
<thead>
<tr>
<th>WEEK</th>
<th>DATE (WEEK COMMENCING)</th>
<th>MODULE</th>
<th>LECTURE TOPIC</th>
<th>TEXTBOOK READING</th>
<th>TUTORIAL / LABORATORY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>23 February</td>
<td>A</td>
<td>Business processes and information systems Approaches to Systems Development</td>
<td>Chapter 1, 2</td>
<td>No lab in week 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A</td>
<td>Project management Investigating Requirements</td>
<td>Chapter 3, Chapter 4</td>
<td>IS development methods</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B</td>
<td>Modelling Requirements</td>
<td>Chapter 5</td>
<td>Project planning CATWOE/Rich picture analysis</td>
</tr>
<tr>
<td>2</td>
<td>2 March</td>
<td>C</td>
<td>Process Modelling</td>
<td>Chapter 6</td>
<td>Activity Modelling</td>
</tr>
<tr>
<td></td>
<td>9 March</td>
<td>C</td>
<td>Data modelling Use case Analysis</td>
<td>Chapter 5, Chapter 7</td>
<td>Process Modelling 1</td>
</tr>
<tr>
<td></td>
<td>16 March</td>
<td>C</td>
<td>Process Modelling</td>
<td>Chapter 6</td>
<td>Activity Modelling</td>
</tr>
<tr>
<td></td>
<td>23 March</td>
<td>C</td>
<td>Data modelling Use case Analysis</td>
<td>Chapter 5, Chapter 7</td>
<td>Process Modelling 1</td>
</tr>
<tr>
<td></td>
<td>30 March</td>
<td>D</td>
<td>Evaluating Alternatives</td>
<td>Chapter 8</td>
<td>Use case Modelling</td>
</tr>
<tr>
<td>3</td>
<td>6 April</td>
<td>D</td>
<td>ERP Systems IS Design 1</td>
<td>Online Chapter 2, Chapter 9</td>
<td>Process Modelling 2</td>
</tr>
<tr>
<td></td>
<td>13 April</td>
<td>BREAK</td>
<td>No Lecture</td>
<td>No Lab</td>
<td>No Lab</td>
</tr>
<tr>
<td>4</td>
<td>20 April</td>
<td>D</td>
<td>IS Design 2</td>
<td>Chapter 10</td>
<td>Data Modelling 1</td>
</tr>
<tr>
<td>5</td>
<td>27 April</td>
<td>D</td>
<td>Database design No Physical Lecture</td>
<td>Chapter 12</td>
<td>No Lab</td>
</tr>
<tr>
<td></td>
<td>4 May</td>
<td>D</td>
<td>User interface design</td>
<td>Chapter 13, Chapter 14</td>
<td>Data Modelling 2 Normalisation</td>
</tr>
</tbody>
</table>
Standard of Assessment

The Business School must ensure that the processes of assessment are fair and are designed to maintain the standards of the School and its students. The School follows the University of Western Australia’s grading system:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>HD</td>
<td>Higher distinction</td>
<td>80-100%</td>
</tr>
<tr>
<td>D</td>
<td>Distinction</td>
<td>70-79%</td>
</tr>
<tr>
<td>CR</td>
<td>Credit pass</td>
<td>60-69%</td>
</tr>
<tr>
<td>P</td>
<td>Pass</td>
<td>50-59%</td>
</tr>
<tr>
<td>N+</td>
<td>Fail</td>
<td>45-49%</td>
</tr>
<tr>
<td>N</td>
<td>Fail</td>
<td>0-44%</td>
</tr>
</tbody>
</table>

The School awards marks leading to these grades by using the following general criteria which are presented here as a clear indication of the School’s expectations. These general criteria may be supplemented by specific standards with regard to a particular assignment.

HD The student has a clear understanding of theory, concepts and issues relating to the subject and is able to adopt a critical perspective. The student is able to clearly identify the most critical aspects of the task and is able to offer a logically consistent and well articulated analysis within the analytic framework presented in the unit. The student is able to draw widely from the academic literature and elsewhere but maintains relevance.

D The student has a clear understanding of theory, concepts and issues relating to the subject. The student is able to develop an analysis of an issue using the analytic framework presented in the unit and is able to identify and evaluate the critical issues. The student is able to draw upon relevant academic and other material.

CR The student demonstrates an understanding of the analytic framework developed in the unit and a partial understanding of concepts and issues. The student is able to identify some key issues and is able to present a logical discussion, but with some conceptual errors or gaps between analysis and conclusions. The student is able to draw upon an adequate range of references and other materials.

P The student generally takes a descriptive rather than analytic approach to the subject. The student is able to demonstrate some understanding of the issues involved but does not demonstrate the ability to apply the analytic framework which had been developed in the unit. Draws primarily upon unit materials for referencing.

N+ The student is unable to demonstrate that he or she understands the core elements of the subject matter. The student is able to provide some insight into issues but misapplies analytic framework developed in the unit, omitting key
factors and, for example, drawing conclusions which are not related to the preceding discussion.

The student is unable to demonstrate any understanding of the subject matter. Material presented for assessment is unrelated to unit framework and shows not effort to identify or address critical aspects of the topic.

The scaling of marks to ensure comparability between classes is an acceptable academic practice. The School and Board of Examiners have the right to scale marks where it is considered necessary to maintain consistency and fairness.

**Supplementary Assessment**

Supplementary Assessment is not offered by the Business School, however, students who achieve a grade between 45-49 in the last unit for their undergraduate degree taken in the last semester of study, will be eligible for a supplementary assessment.

**TEACHING AND LEARNING RESPONSIBILITIES**

**Charter of student rights and responsibilities**

This Charter of Student Rights and Responsibilities upholds the fundamental rights of students who undertake their education at the University of Western Australia.

It recognises that excellence in teaching and learning requires students to be active participants in their educational experience. It upholds the ethos that in addition to the University's role of awarding formal academic qualifications to students, the University must strive to instil in all students independent scholarly learning, critical judgement, academic integrity and ethical sensitivity.

Please refer to the guild website the full charter of student rights, located at [http://www.secretariat.uwa.edu.au/home/policies/charter](http://www.secretariat.uwa.edu.au/home/policies/charter)

**Student Guild contact details**

The University of Western Australia Student Guild
35 Stirling Highway
Crawley WA 6009
Phone: (+61 8) 6488 2295
Facsimile: (+61 8) 6488 1041
E-mail: enquiries@guild.uwa.edu.au
Website: [http://www.guild.uwa.edu.au](http://www.guild.uwa.edu.au)

**Ethical Scholarship, Academic Literacy and Academic Misconduct**

**Ethical scholarship** is the pursuit of scholarly enquiry marked by honesty and integrity.

**Academic Literacy** is the capacity to undertake study and research, and to communicate findings and knowledge, in a manner appropriate to the particular disciplinary conventions and scholarly standards expected at university level.
**Academic misconduct** is any activity or practice engaged in by a student that breaches explicit guidelines relating to the production of work for assessment, in a manner that compromises or defeats the purpose of that assessment. **Students must not engage in academic misconduct.** Any such activity undermines an ethos of ethical scholarship. Academic misconduct includes, but is not limited to cheating, or attempting to cheat, through:

- Collusion
- Inappropriate collaboration
- Plagiarism
- Misrepresenting or fabricating data or results or other assessable work
- Inappropriate electronic data sourcing/collection
- Breaching rules specified for the conduct of examinations in a way that may compromise or defeat the purposes of assessment.

Penalties for academic misconduct vary according to seriousness of the case, and may include the requirement to do further work or repeat work; deduction of marks; the award of zero marks for the assessment; failure of one or more units; suspension from a course of study; exclusion from the University, non-conferral of a degree, diploma or other award to which the student would otherwise have been entitled. Refer to the Ethical Scholarship, Academic Literacy and Academic Misconduct located on the University’s website at [http://www.teachingandlearning.uwa.edu.au/tl4/for_uwa_staff/policies/student_related_policies/academic_conduct](http://www.teachingandlearning.uwa.edu.au/tl4/for_uwa_staff/policies/student_related_policies/academic_conduct)

**Academic Conduct Essentials (ACE)**

From Semester 1, 2008 all newly enrolled students are required to complete a short compulsory online unit called *Academic Conduct Essentials* (ACE) within the first 10 weeks of semester. ACE introduces students to essential knowledge regarding ethical scholarship, it helps prepare them for the expectations they will need to meet during their university career and it informs them of correct academic conduct.

ACE can be accessed via WebCT ([http://webct6.uwa.edu.au](http://webct6.uwa.edu.au)). In order to pass the unit, the unit quiz must be completed with a mark of 80% or greater. To gain the required pass mark students may attempt the quiz as many times as they wish. Completion of the unit will be recorded as an Ungraded Pass (UP) on the student’s academic record. Non-completion (NC) within the required timeframe will also be documented on formal academic records (ie, in either case the grade will appear on transcripts). More information on ACE is available at [http://ace.uwa.edu.au](http://ace.uwa.edu.au)

**Acknowledging sources of information**

In the course of your individual and team work assignments, you will encounter ideas from many sources. These will include journal and newspaper articles, commentaries, books, web sites and other electronic sources, original case sources, lecture materials. All assignments that you submit must acknowledge all the different sources you have used. Not to acknowledge your sources is plagiarism, a form of dishonesty. Plagiarism is the misappropriation of the work or ideas of others and presenting them as your own. This is reprehensible from both an ethical and legal viewpoint. Neither the School nor the University accepts ignorance or the fact that a student’s previous acts of plagiarism had been undetected as a defence.

In order to avoid engaging in plagiarism it is your responsibility to acknowledge all of your sources in any work submitted for assessment and it is essential that you
reference the work of others correctly. Where you quote directly from a source, you must ensure that any direct quotations are placed in quotation marks and are fully referenced. Even when you do not quote directly and are just referring to or expanding on the work of others, you must still acknowledge the sources of your information and ideas. Close paraphrasing in which you change a few phrases around, leave a clause out of a long sentence or put the original sentences in a different order is still plagiarism. To mark words as a quotation the entire text that has been copied should be enclosed within the quotation marks. If the copied text is four or more lines in length, it may be more appropriate to set it as a separate and indented paragraph. Each time that text is copied, the source must be acknowledged with a reference citation, including the page number.

If you have any doubts concerning appropriate referencing formats or how to acknowledge the work of others correctly, you should seek the advice of your lecturer.

The Faculty of Economics and Commerce has the following regulation on Plagiarism: “The Faculty will promote the highest levels of probity and honesty amongst students and will provide instruction on ethical conduct. By submitting assignments and other work for assessment, students acknowledge Faculty’s duty to guard against plagiarism, including by electronic means such as Turnitin or Mydropbox. A lecturer may require students submitting written or electronic work to sign a Plagiarism Declaration Form indicating that the work is original.”

Business IRIS (Introductory Research and Information Skills)

Business IRIS is an online, self paced unit that provides an introduction to the skills needed to find and use information effectively and efficiently when studying in Business. Topics covered include how to locate and use library resources, the search process and search strategies, how and why to reference work, and evaluating online sources.

Business IRIS is a WebCT unit containing 8 modules, the final one being a self-test module. It is recommended that you work through the modules in the order they are presented and finish with the Test Yourself quiz and survey. Multiple attempts at the quiz are allowed.

Although the Business IRIS unit is not compulsory you are strongly encouraged to complete it as it will greatly help you in your studies. Students who have completed the Arts or Science IRIS will be familiar with much of the Business IRIS but are still most welcome to complete Business IRIS.

Appeals against academic assessment

In the first instance, students are strongly advised to talk informally to the lecturer about the grade awarded. The University provides the opportunity for students to lodge an appeal against any mark which he or she feels is unfair. Any student making an appeal is under an obligation to establish a prima facie case by providing particular and substantial reasons for the appeal. It is recommended that students contact the Guild Education Officers to aid them in the appeals process.

There is a 20 day time limit for making any such appeal. An appeal against academic assessment may result, as appropriate, in an increase or decrease in the
mark originally awarded. The University regulations relating to appeals and the form on which the appeal should be lodged can be found at http://www.secretariat.uwa.edu.au/home/policies/appeals