## Course Outline

### INFS7007 Information Systems Analysis & Modelling

**Semester 1, 2014**

**STUDENTS:** Course details change from semester to semester. **Please check** that you are reading the Course Outline for the correct semester.

### Course Description

This course aims to provide students with the knowledge and skills necessary to successfully undertake information systems analysis. Lectures and tutorials provide coverage of the concepts, skills, methodologies, techniques, tools and perspectives considered essential for systems analysts working with modern information systems and their development.

### Graduate Studies Select Classification

Transitional.

### Contacts

<table>
<thead>
<tr>
<th>Role</th>
<th>Office address</th>
<th>Contact Details</th>
<th>Consultation Times</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Convenor and Lecturer (Course Authority)</td>
<td>HN 2034 Hanna Neumann Bldg 21</td>
<td><a href="mailto:alex.richardson@anu.edu.au">alex.richardson@anu.edu.au</a> 6125 9807</td>
<td>Posted to course website in Week.</td>
</tr>
<tr>
<td>Dr Alex Richardson</td>
<td>HN 2037 Hanna Neumann Bldg 21</td>
<td><a href="mailto:enquiries.abis@anu.edu.au">enquiries.abis@anu.edu.au</a> 6125 0025 or 6125 7968</td>
<td>Office hours 9am – 5pm Monday – Friday</td>
</tr>
<tr>
<td>Tutor/s</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>To be announced</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

### Communication

**Email**

If necessary, the lecturers and tutors for this course will contact students on their official ANU student email address. Information about your enrolment and fees from the Registrar and Student Services’ office will also be sent to this email address.
Announcements
Students are expected to check the Wattle site for announcements about this course, e.g. changes to timetables or notifications of cancellations. Notifications of emergency cancellations of lectures or tutorials will be posted on the door of the relevant room.

Course URLs
More information about this course may be found on:

- Programs and Courses (http://programsandcourses.anu.edu.au/2014/Catalogue)
- the College of Business and Economics website (http://cbe.anu.edu/courses) and
- Wattle (https://wattle.anu.edu.au), the University’s online learning environment. Log on to Wattle using your student number and your ISIS password.

Course Information

Learning Outcomes
By the end of this course, you are expected to have attained a knowledge of or proficiency in the following areas:

- The organizational context in which information systems development is undertaken;
- Basic systems theory and the role of the systems analyst;
- The systems analysis and development process
- Eliciting information system requirements;
- Constructing process, logic and data models using traditional modelling techniques;
- Basic object-oriented modelling using UML; and
- “Soft” aspects and techniques in systems analysis

Workload
You should expect to spend at least twice to three times as much time in private study per week as there are actual contact hours (i.e. lectures and tutorials) for the course. That is, you should normally plan to spend around 6 to 9 hours per week as a minimum in private study for this course, a substantial part of which should be devoted to completing the weekly assigned tutorial work. If you are conscientious with your private study as well as keeping up to date with your tutorial work then you should have little trouble succeeding with this course. However, if you let the work slide, even if only for a week or two, then it quickly becomes very difficult to catch up and get back on top of it again – so don’t make that mistake!

Course Delivery
On campus: One two hour lecture and a one hour tutorial class per week.

Attendance Requirements
Student attendance at lectures and tutorial classes is expected and is certainly highly desirable from a learning point of view (that, after all, is why such classes are conducted). It should also be noted that while no marks are officially allocated for attendance or participation in this course, under certain circumstances attendance and participation may be taken into account in the determination of a final mark and grade.
Tutorial and /or Seminar Registration

Tutorial and /or Seminar signup for this course will be done via the Wattle course site. Detailed information about signup times will be provided on Wattle or during your first lecture.

When tutorials are available for enrolment you will need to follow these simple steps:

1. Log on to Wattle, and go to the course site.
2. Click on the link “Tutorial signup here”
3. On the right of the screen, click on the tab “Become Member of ……” for the tutorial class you wish to enter.
4. Confirm your choice

If you need to change your enrolment, you will be able to do so by clicking on the tab “Leave group…” and then re-enrol in another group. You will not be able to enrol in groups that have reached their maximum number.

Please note that enrolment in ISIS must be finalised for a student to have access to the Wattle course site.”

Study Schedule

<table>
<thead>
<tr>
<th>Week beginning</th>
<th>Theme / Topic / Module</th>
<th>Activity</th>
<th>Required student preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>17 Feb</td>
<td>Course Administration &amp; Introduction to Systems Analysis</td>
<td>Lecture (no tutorial class this week)</td>
<td>Read Ch1 of text, do tutorial work for Wk 2</td>
</tr>
<tr>
<td>24 Feb</td>
<td>Elements of Systems Theory &amp; Concepts of Information</td>
<td>Lecture &amp; tutorial class</td>
<td>Read notes provided, do tutorial work for Wk 3</td>
</tr>
<tr>
<td>3 Mar</td>
<td>Project Selection, Feasibility and Management</td>
<td>Lecture &amp; tutorial class</td>
<td>Read Ch3 of text, do tutorial work for Wk 4</td>
</tr>
<tr>
<td>10 Mar</td>
<td>&quot;Soft” Techniques</td>
<td>Lecture &amp; tutorial class</td>
<td>Read notes provided, do tutorial work for Wk 5</td>
</tr>
<tr>
<td>17 Mar</td>
<td>Requirements Determination</td>
<td>Lecture &amp; tutorial class</td>
<td>Read Ch4 &amp; Ch5 of text, do tutorial work for Wk 6</td>
</tr>
<tr>
<td>24 Mar</td>
<td>Process Modelling</td>
<td>Lecture &amp; tutorial class</td>
<td>Read Ch7 of text, do tutorial work for Wk 7</td>
</tr>
<tr>
<td>31 Mar</td>
<td>Process and Logic Modelling</td>
<td>Lecture &amp; tutorial class</td>
<td>Read Ch9 of text, do tutorial work for Wk 8</td>
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<tr>
<td></td>
<td>Mid semester teaching break – Monday 7 April to Friday 18 April</td>
<td></td>
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</tr>
<tr>
<td>21 Apr</td>
<td>Data (Entity-Relationship) Modelling</td>
<td>Lecture &amp; tutorial class</td>
<td>Read Ch8 of text, do tutorial work for Wk 9</td>
</tr>
<tr>
<td>28 Apr</td>
<td>Data (Entity-Relationship) Modelling</td>
<td>Lecture &amp; tutorial class</td>
<td>Read Ch8 of text &amp; notes provided, do tutorial work for Wk 10</td>
</tr>
<tr>
<td>5 May</td>
<td>Object-oriented analysis &amp; UML</td>
<td>Lecture &amp; tutorial class</td>
<td>Re-read Ch2 &amp; begin reading Ch10 of text, do tutorial work for Wk 11</td>
</tr>
<tr>
<td>12 May</td>
<td>Object-oriented analysis &amp; UML</td>
<td>Lecture &amp; tutorial class</td>
<td>Continue reading Ch10 of text, do tutorial work for Wk 12</td>
</tr>
<tr>
<td>19 May</td>
<td>Object-oriented analysis &amp; UML</td>
<td>Lecture &amp; tutorial class</td>
<td>Continue reading Ch10 of text, do tutorial work for Wk 13</td>
</tr>
<tr>
<td>26 May</td>
<td>Moving from Analysis to Design &amp; System Development Methodologies</td>
<td>Lecture &amp; tutorial class</td>
<td>Read Ch2 &amp; Ch6 of text, and notes provided</td>
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<tr>
<td></td>
<td>Semester 1 examination period – Thursday 5 June to Saturday 21 June</td>
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</table>
Assessment

Academic Honesty and integrity
It is the responsibility of each individual student to ensure that:

a. you are familiar with ANU policy for academic integrity
b. work submitted for assessment is original
c. appropriate acknowledgement and citation is given to the work of others
d. you declare your understanding of, and compliance with, the principle of academic integrity by completing the appropriate cover sheet when submitting assessment items

For information on academic honesty and integrity please refer to http://academichonesty.anu.edu.au/

Proposed Assessment Schedule
Details about assessment may change during the first two weeks of semester. Please ensure that you check with your lecturer or tutor about any changes. Changes to the assessment schedule will be posted to the Wattle site.

<table>
<thead>
<tr>
<th>Assessment item</th>
<th>Description and detail of assignment</th>
<th>Specific requirements</th>
<th>Due Date</th>
<th>Weighting (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tutorial work</td>
<td>Weekly tutorial questions</td>
<td>Refer to course website for assigned questions</td>
<td>Weekly</td>
<td>40</td>
</tr>
<tr>
<td>Project</td>
<td>Project (three submissions – for details see the more detailed project description below)</td>
<td>Proposal Mid-project progress report Final project report</td>
<td>End of week 3 End of week 9 Friday of the week following the end of semester</td>
<td>60</td>
</tr>
</tbody>
</table>

Both components of the above assessment are compulsory and must be attempted. Furthermore, to achieve an automatic pass grade or above in this course you need to:

- Obtain 50% or more as an aggregate mark overall, and
- Achieve a minimum of 40% for each assessment component (i.e. at least 16 out of 40 for the tutorial work, and 24 out of 60 for the project).

Tutorials and Tutorial Work
You are expected to attend one 1-hour tutorial class per week, starting in the 2nd week of semester. As noted above, the tutorial work comprises 40% of your final course mark. A set of questions will be assigned for each week of the semester and you are required to attempt to answer these questions and submit your answers to your tutor on completion of the tutorial class of the following week. Each week's tutorial questions will deal with the lecture material presented during that week. Note that your tutorial answers must be provided in word-processed or other appropriate electronically produced form. Unless specifically noted in the tutorial instructions, handwritten work will not be accepted or, if submitted, will not be marked.

Your tutor will rate your submitted tutorial work each week on a 0 to 4 point scale:

- 0 = No work is submitted, or all of the answers are of an unacceptably poor standard.
- 1 = Not all questions are attempted, or all questions are attempted but most or all of the answers are significantly or seriously flawed.
- 2 = All questions are attempted but the quality of most of the submitted work is not much better than a barely acceptable standard.
• 3 = All questions are attempted and the quality of the answers is generally good.
• 4 = All questions are attempted and the quality of the answers is, on the whole, excellent.

Note that individual questions will not be marked. Nor should you expect there to be detailed written comments on your submitted work because you are expected to obtain this kind of feedback for yourself during the discussion in tutorial classes. Also note that the tutorial questions and work listed for each week should be done during that week, in preparation for discussion and submission in the following week’s class. That is, for example, the work in Tutorial 1 should be attempted during week 1, before the class scheduled for week 2 at which it will be discussed and submitted for assessment.

**It is important to understand that if you do not attempt all of the tutorial questions you cannot obtain a mark higher than 1 out of 4, no matter how well you might have done the work that you did attempt. It is, therefore, obviously in your interest to at least attempt ALL of each week’s questions!**

At the end of semester your ten highest tutorial marks (giving a maximum possible mark of 40) will be totalled to give your mark for the tutorial component of the course assessment.

**The Project**

The project comprises the major component of the assessment for this course (60%). It consists, essentially, of you, the student, developing the basic analysis documentation for a proposed information system and you should regard it as offering both an educational experience and an opportunity for you to demonstrate that you have mastered the various techniques and tools covered in the course.

You, the student, are responsible for choosing what will be the target system for your project. Typically, past students who have produced quality submissions have chosen topics related to hobbies, work or other interests for which they already possess the necessary information and knowledge or can readily gain access to it from expert others. It is therefore best – both from the point of view of learning opportunities as well as getting the best marks – to choose a project topic that is “real” (i.e. relates to a genuine problem, opportunity or need in the real world) rather than one that is entirely fictional (i.e. dreamed up wholly within your own head).

The submissible work for the project will consist of three components:

- A proposal, worth 5% of the total project mark. This will be due no later than the end of week 3 of the course and, in it, you are to outline the target topic and information system that you have chosen to pursue. Note that, at least for the first few weeks of the semester, it will be wise to have a second topic/system “up your sleeve” just in case your first choice turns out not to be suitable for some reason.
- A mid-project progress report, worth 10% of the total project mark. This will be due no later than the end of week 9 of the course and in it you are to submit the analysis work that you have completed to that point.
- A final report, worth the remaining 85% of the total project mark. As noted in the table above, this is due no later than 5.00pm Friday of the week following the end of semester (6 June 2014). It is, of course, to contain the completed analysis work you have done for the project.

Further details about the project will be provided during the first week of the course.
Learning Outcomes-Assessment
How well have you achieved the learning outcomes for this course? Your lecturer makes this judgement based on your assignments and examination papers. This table illustrates how each assessment item provides evidence about your achievements against each learning outcome.

<table>
<thead>
<tr>
<th>Course Learning Outcomes</th>
<th>Weekly Assessment</th>
<th>Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>By the end of this course, you are expected to have attained a knowledge of or proficiency in the following areas:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. The organizational context in which information systems development is undertaken;</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>2. Basic systems theory and the role of the systems analyst;</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>3. The systems analysis and development process</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>4. Eliciting information system requirements;</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>5. Constructing process, logic and data models using traditional modelling techniques;</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>6. Basic object-oriented modelling using UML; and</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>7. “Soft” aspects and techniques in systems analysis</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Scaling
Your final mark for the course will be based on the raw marks allocated for each assignment or examination. However, your final mark may not be the same number as produced by that formula, as marks may be scaled. Any scaling applied will preserve the rank order of raw marks (i.e. if your raw mark exceeds that of another student, then your scaled mark will exceed the scaled mark of that student), and may be either up or down.

Extensions
Extensions for submission of assessable work will not normally be allowed. Only in exceptional and unavoidable circumstances will consideration even be given to a request for an extension, and then there is no guarantee that such a request will be approved. If you believe you have grounds for an extension, you must contact your tutor or lecturer as soon as possible before the due date of the work concerned.

Penalties
Assessable work that is submitted late, without an approved extension of time for submission, will not be accepted or marked.

Examinations
There will be no examination (mid-semester or final) for this course.

Texts and Other Reading
Prescribed Texts
The prescribed textbook for this course is:

It is essential that you have ready access to this book (but see below) since it is the primary resource for your learning. Other supplementary material needed will be provided, as will the presentations used in lectures (downloadable from the Wattle course website). Solutions to the weekly assigned tutorial exercises will not be
provided since students are expected to attend the tutorial classes in which these are discussed, and make their own notes on the basis of the discussion.

Among previous textbooks used in earlier versions of this course are:


Any of these, while different from, not as up-to-date and arguably less good in at least some respects than the prescribed textbook by Kendall and Kendall, would still make a suitable reference for the course and would therefore be an acceptable alternative.

**Technology, Software, Equipment**

You are assumed to have access to computing resources either of your own or those available in ANU computing laboratories. This is because, unless explicitly stated otherwise, you will be expected to use appropriate software for generating your answers to the weekly tutorial exercises. The software you will need will include standard office automation software (word processor, spreadsheet, etc) as well as more specialized drawing and modelling software that will be discussed at the appropriate time in class.

**Requisites**

There are no formal prerequisites for this course. However, you are assumed to have done an introductory or overview information systems course or possess basic background knowledge of information systems such as is covered in the following textbooks (although this is not intended to be an exclusive list since there are many other comparable textbooks covering similar topics and material):


**Co-teaching**

This course will be co-taught in 2014 with the undergraduate course INFS2024: Information Systems Analysis. The lectures will be common to both courses but the tutorial classes will be separate and the weekly exercises discussed in them will differ in some of their content, as will the expected level of quality of the answers students in the different courses provide. The assessment for the two courses will also differ, as will be discussed in the first lecture.

**General Information for all Students**

Please visit the following links:


http://policies.anu.edu.au/