

## **INFS 2603 Business Analysis Using Design Thinking**

### **Course Outline Semester 2, 2017**

#### **Course-Specific Information**

The Business School expects that you are familiar with the contents of this course outline. You must also be familiar with the Course Outlines Policies webpage which contains key information on:

- Program Learning Goals and Outcomes
- Academic Integrity and Plagiarism
- Student Responsibilities and Conduct
- Special Consideration
- Student Support and Resources

This webpage can be found on the Business School website:

<https://www.business.unsw.edu.au/degrees-courses/course-outlines/policies>

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## COURSE-SPECIFIC INFORMATION

### 1 STAFF CONTACT DETAILS

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Tutor	Shri Gurumurthy	TBA
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The best way to contact your lecturer or tutor is via email. Please note that **only your UNSW email account** should be used for formal notices and correspondence regarding the course. Always sign your email with your name and student number. To protect student privacy, correspondence originating from non-UNSW email accounts will not elicit a response. **The subject of your e-mail should begin with the course code (i.e., INFS2603) and should be signed with your name and zID.**

Moodle will be utilised for all course communications to the class i.e. notices, assignment information and course content. Please check Moodle **regularly** as this is where we communicate urgent notices when needed. If you need to contact the School urgently you can contact the School Office on 9385-5320 or email: [istm@unsw.edu.au](mailto:istm@unsw.edu.au).

### 2 COURSE DETAILS

#### 2.1 Teaching Times and Locations

Lectures start in Week 1(to Week 12): The Time and Location are:

Lecture A Tuesday 14:00 – 15:00 Colombo Theatre A (K-B16-LG03)

Lecture B Wednesday 11:00 – 12:00 Colombo Theatre C (K-B16-LG05)

Tutorials start in Week 2 (to Week 13). A full list of tutorials, times and tutors will be on the Course Website.

#### 2.2 Units of Credit

The course is worth 6 units of credit.

#### 2.3 Summary of Course

INFS2603 is a Level 2 course that continues students' study of Information Systems by furthering their knowledge and skills in relation to business analysis in contemporary settings. This course utilizes the principles of design thinking and object-oriented approaches to understand and solve business problems. In lectures, students will study

a range of methods, tools and techniques used in planning, analysing, designing and implementing business information systems. During weekly practical workshops, students will get the chance to apply traditional and contemporary approaches to understand and solve real-world cases, utilizing their conceptual knowledge.

## **2.4 Course Aims and Relationship to Other Courses**

Whenever a business information system is developed, selected, purchased or implemented, a business systems analysis & design effort is usually undertaken. This could be a small task or a large-scale project. Therefore, INFS2603 is one of the cornerstone courses in the discipline of information systems offered by the School. The aim of the course is to provide a contemporary understanding of the process of analysing and designing business information systems using design thinking principles and other contemporary approaches. The course will hone the conceptual and analytical skills required for analysing business problems, eliciting user requirements and developing system specifications.

This course covers material that is foundational to the discipline of information systems. It assumes completion of the core information systems courses INFS1602 Digital Transformation in Business and INFS1603 Introduction to Business Databases. This course provides the student with concepts and skills that are essential in careers such as business systems analysts, systems analysts, designers, and developers.

## **2.5 Student Learning Outcomes**

The Course Learning Outcomes are what you should be able to DO by the end of this course if you participate fully in learning activities and successfully complete the assessment items.

By the end of this course, you should be able to:

- Articulate and explain the roles of system and business analysts.
- Analyse business problems and elicit user requirements by applying design thinking principles.
- Apply business process modelling techniques to organisational processes.
- Apply UML notation and modelling to the analysis and design of business information systems.
- Explain and apply principles for effective user interface design in interaction environments such as desktop, mobile and wearables.
- Apply project management tools to work collaboratively in groups.

The Learning Outcomes in this course also help you to achieve some of the overall Program Learning Goals and Outcomes for all undergraduate students in the Business School. Program Learning Goals are what we want you to BE or HAVE by the time you successfully complete your degree (e.g. 'be an effective team player'). You demonstrate this by achieving specific Program Learning Outcomes – what you are able to DO by the end of your degree (e.g. 'participate collaboratively and responsibly in teams').

For more information on Program Learning Goals and Outcomes, see the School's Course Outlines Policies webpage available at <https://www.business.unsw.edu.au/degrees-courses/course-outlines/policies>.

The following table shows how your Course Learning Outcomes relate to the overall Program Learning Goals and Outcomes, and indicates where these are assessed (they may also be developed in tutorials and other activities):

Program Learning Goals and Outcomes		Course Learning Outcomes	Course Assessment Item
<i>This course helps you to achieve the following learning goals for all Business undergraduate students:</i>		<i>On successful completion of the course, you should be able to:</i>	<i>This learning outcome will be assessed in the following items:</i>
1	Knowledge	<p>Articulate and explain the roles of system and business analysts.</p> <p>Apply UML notation and modelling to the analysis and design of business information systems.</p> <p>Apply business process modelling techniques to organisational processes.</p> <p>Explain and apply principles for effective user interface design in interaction environments such as desktop, mobile and wearables.</p>	<ul style="list-style-type: none"> <li>• Final Exam</li> <li>• Group Assignment</li> <li>• Tutorial Activities</li> </ul>
2	Critical thinking and problem solving	<p>Analyse business problems and elicit user requirements by applying design thinking principles.</p> <p>Apply business process modelling techniques to organisational processes.</p> <p>Apply UML notation and modelling to the analysis and design of business information systems.</p>	<ul style="list-style-type: none"> <li>• Final Exam</li> <li>• Group Assignment</li> <li>• Tutorial Activities</li> </ul>
3a	Written communication	<p>Articulate and explain the roles of system and business analysts.</p> <p>Explain and apply principles for effective user interface design in interaction environments such as desktop, mobile and wearables.</p>	<ul style="list-style-type: none"> <li>• Final Exam</li> <li>• Group Assignment</li> </ul>
3b	Oral communication	<p>Articulate and explain the roles of system and business analysts.</p> <p>Explain and apply principles for effective user interface design in interaction environments such as desktop, mobile and wearables.</p>	<ul style="list-style-type: none"> <li>• Group Assignment</li> <li>• Tutorial Activities</li> </ul>
4	Teamwork	<p>Apply project management tools to work collaboratively in groups.</p>	<ul style="list-style-type: none"> <li>• Group Assignment</li> <li>• Tutorial Activities</li> </ul>
5a	Ethical, social and environmental responsibility	<p>Analyse business problems and elicit user requirements by applying design thinking principles.</p>	<ul style="list-style-type: none"> <li>• Final Exam</li> <li>• Group Assignment</li> <li>• Tutorial Activities</li> </ul>
5b	Social and cultural awareness	<p>Analyse business problems and elicit user requirements by applying design thinking principles.</p>	<ul style="list-style-type: none"> <li>• Final Exam</li> <li>• Group Assignment</li> <li>• Tutorial Activities</li> </ul>

## 3 LEARNING AND TEACHING ACTIVITIES

### 3.1 Approach to Learning and Teaching in the Course

At university the focus is on self-directed search for knowledge. Lectures, tutorials, laboratories, textbooks, exams and other resources are all provided to help this process. The primary vehicle in this course is work carried out in collaboration with other students, inside and outside the classroom, under the guidance of your lecturer.

In class we will work through exercises designed around case studies and real world problems, and this will be a unique opportunity for you to observe business systems analysis and design techniques in practice. You are encouraged to seek clarification by asking questions during class. The group assignment provides another opportunity to apply the concepts learned.

We will have to cover a lot of material in this course, so it is vital that you study from Week 1. This means you should read the set chapters in the textbook and prepare for your tutorials. The course team will facilitate your learning by providing guidance as to what you need to study, and working with you on problems you may encounter. It is, however, your responsibility to make a concerted and timely effort to study. If you make this effort you will find the material interesting, the course worthwhile and the interaction with your fellow students stimulating. You should also do well.

### 3.2 Learning Activities and Teaching Strategies

The teaching strategies will include lectures and experiential learning through the workshops that will feature the design thinking method. Lectures will be used to introduce students to concepts and methods in business analysis. Contemporary teaching methods, such as the design thinking method will be used to create an experiential learning environment in workshop settings. Through this hands-on approach, students will be given a chance to experiment and innovate with new ways of understanding and visualising business problems, eliciting business/user requirements, and analysing and designing business information systems.

The course involves four key elements in facilitating your learning: the lecture, the tutorial exercises, the collaborative group project, and your own study.

**Each lecture** will provide a short overview of topic at hand and will focus on explaining the difficult concepts and issues. The role of the lecture is to set the agenda, and to introduce important topics. Slides of the lectures will be available, but these need to be supplemented by your own notes. You will also need to complete the weekly-recommended readings whenever provided.

**Tutorial exercises and quizzes** relate to the topic of the current or previous weeks. The role of the exercises is to help build your understanding through the application of what you have learnt to case studies or real-world scenarios. They also give you the opportunity to discuss your work with your fellow students, and hence get an indication of your own progress. Your own notes from tutorials are also an important resource for later reference.

**The group assignment** is a major opportunity for students to demonstrate knowledge of systems analysis and design techniques, skill in their application, and skill in the management of a group assignment that requires on-going commitment throughout the semester.

**Self-directed private study** is an important component of this course. The aims of all tertiary institutions refer, implicitly or explicitly, to the development of self-management skills. You should supplement lectures and classroom activities by reading the set readings, as well as further relevant materials from books, journals and Internet sources, in order to acquire a better understanding of different elements of the course, such as background to the assignment case scenario.

## 4 ASSESSMENT

### 4.1 Formal Requirements

In order to pass this course, you must:

- achieve a composite mark of at least 50;
- make a satisfactory attempt at all assessment tasks (see below); a mark of 45% or higher in all major assessment components is normally regarded as satisfactory
- attain a mark of at least 45% in the final exam
- in the case of peer assessed group work, the mark assigned to each member of the group may be scaled based on peer assessment of each member's contribution to the task.

The School reserves the right to scale final marks to a mean of 60%, or thereabouts. It should be noted that group members are expected to work in a harmonious and professional fashion, which includes appropriate management of non-performing members.

### 4.2 Assessment Details

Assessment Task	Weighting	Length	Due Date
Tutorial Preparation & Participation	20%	See below	Weekly
Group Assignment	30%	See below	Part A: Week 7 (8 <sup>th</sup> September 11:55 PM) & Part B: Week 12 (Group Assignment Part A Due: 20 <sup>th</sup> October 11:55 PM)
Final Examination	50%	2 hours	University Exam Period
Total	100%		

#### Tutorial Preparation & Participation (20%)

Tutorial participation (Weeks 2-9 and Weeks 10-13) will account for 20% of your (individual) mark. Please note that merely turning up for the tutorial will not guarantee a mark. Marks will be given for students who have prepared for the tutorial (i.e. completed any necessary preparation work or homework), are on time for tutorials, and complete exercises (quizzes, case studies, etc.) during the tutorials. Failure to complete preparation work and disruption to tutorials may result in students receiving a Mark of 0



for a given tutorial. Late arrivals are not desirable and **students arriving after 20 minutes into the class will be marked absent**. Attendance in tutorials is mandatory and students will invite the following penalties for absence without valid reasons:

- For three absences, 50% of the attained mark in the component will be awarded (i.e., if you score 10 marks on a total maximum of 20, 5 marks will be awarded).
- For four or more absences, 25% of the attained mark in the component will be awarded (i.e., if you score 10 marks on a total maximum of 20, 2.5 marks will be awarded).

For circumstances whereby students are unable to attend a given tutorial, and a valid medical certification is provided, students may be able to complete makeup / supplementary material in order to receive a mark. Students that wish to enquire about this should email the LIC and CC their INFS2603 tutor.

As stated in Section 1, please note that **only your UNSW email account** should be used for formal notices and correspondence regarding the course. Always sign your email with your name and student number. **The subject of your e-mail should begin with the course code (i.e. INFS2603).**

### **Group Assignment (30%)**

The group assignment is composed of two submissions (Part A and Part B) and is intended to give you a flavour of analysing and designing business systems using traditional and contemporary approaches. **Part A** will require students to engage with problems relating to Planning and Analysis Modelling in a case study scenario following a traditional approach to systems analysis and design. **Part A is due in Week 7. Part B** will require students to engage with problems relating to a case study scenario following contemporary approaches to systems analysis and design. **Part B is due in Week 12.** Further details, including assessment criteria, will be provided on Moodle in a separate document.

For this assignment (both Part A and B), students work in the same groups throughout the semester. It will be undertaken in groups of four (or five to fill), from the same tutorial class. Submission procedures are covered in a later section of this outline (4.4). Failure to comply will generally attract a penalty. Marks will be awarded for the comprehensiveness of the answer. Further information regarding the group assignment will be provided in class.

To enhance group productivity and reporting, students should explicitly communicate all tasks, meeting minutes, problems, updates, etc. via email (cc'ing all members of the group). Ideally, groups should meet face-to-face on campus often; such meetings should be well prepared for, have a defined goal/objective, and be 2-3 hours in length. Past experiences from students suggest that '1 hour meetings' are typically unproductive. Students should work together on solving the case-study based scenarios and other exercises on a weekly basis. In order to gain the maximum marks, students should actively collaborate in answering each exercise. Groups are required to compulsorily maintain a group diary logging all group meetings covering aspects such as key decisions taken, task allocation, member attendance and so on. This is meant to help the group track their progress.

This assignment is a peer evaluated group work. Each member of the group must submit a peer evaluation form (properly filled in and SIGNED) at the time of submission of each part of the assignment. Any claims of unequal contribution in the peer assessment form

**must be** backed with supporting documentation (or evidence) (e.g., group diaries, emails, communication logs and/or screenshots of text messages being communicated). This supporting documentation must be submitted **together** with the peer assessment form for an **investigation to be initiated by the tutor** in the presence of **all members**.

Supporting documentation must demonstrate that the problem has been **ongoing** and that the accused has been **made aware** that they have continuously failed to meet the expectations of the other group member(s) and that any steps proposed by the accuser(s) to resolve the problems have been rebuffed or ignored by the accused. Evidence should also demonstrate that the group has exhausted all possibilities to manage the underperforming member(s). Please note that doctoring supporting documentation or making false claims of unequal contribution will be deemed as serious misconduct and the incident will be referred to the Head of School.

Upon receiving the necessary documents from the accuser(s), the tutor will inform the accused (through his/her UNSW email account) that a claim of unequal contribution has been filed against him/her. The accused will then have **one working day** to submit any supporting documentation in his/her defence against the accusation of unequal contribution. The tutor will compile all these documents into a single case file.

The tutor will **only** initiate an investigation when all the conditions for a valid claim by the accuser(s) of unequal contribution have been met. Whenever the tutor decides to initiate an investigation, he/she will notify all members (through the UNSW email accounts) that an investigation has been initiated and schedule an investigation session. **All** group members must **make all possible efforts** to attend the investigation sessions scheduled by the tutor. These sessions also represent an opportunity for the accused to defend their cases in front of their accuser(s). If the group members are not able to find a common time to meet with the tutor after several attempts to schedule the investigation session, the tutor will then be given the discretion to decide on the distribution of each group member's contribution based on **all** evidence submitted by both the accuser(s) and the accused. The decision by the tutor is then binding and all members have to accept the outcome.

Upon the conclusion of the investigation, be it in the presence of all members or through the tutor's discretion (whichever applies), the mark assigned to each member of the group may be **scaled according to the distribution of each group member's contribution to the task**.

### **Final Examination (50%)**

A formal closed-book 2-hour examination worth 50% of the overall marks will be held during the official examination period. You must plan to be available for the full examination period to attend the final exam. In addition, you should also ensure that you will be available for a supplementary examination in the event of illness or misadventure. All material covered in lectures, classroom exercises, and set readings is examinable. All exams are conducted in accordance with the UNSW Rules for the Conduct of Examinations and it is your responsibility to be familiar with these rules.

## **4.3 Assessment Format**

All written assignments should be submitted in a Portable Document Format (pdf).

## **4.4 Assignment Submission Procedure**

You are required to submit an electronic copy of each assignment via the Turnitin Assignment submission link on Moodle.

Time and dates for assignment submission will be provided by the LIC.

Students are reminded to keep a copy of all work submitted for assessment. **The submission of non-original materials may be considered an act of plagiarism.**

A signed cover page must accompany submission of assignments. Digital signatures are not allowed. Missing cover page or cover page without authentic signatures may result in a **penalty of 10%** of the maximum marks available for assignments.

#### **4.5 Special Consideration, Late Submission and Penalties**

For information on Special Consideration please refer to the Business School's [Course Outlines Policies](#).

Late submission of an assignment is not desirable. Assignments are to be submitted on the due date. The late submission of assignments carries a penalty of 10% of the awarded marks for that assignment per day of lateness (including weekends and public holidays) unless an extension of time has been granted by the Lecturer-in-Charge.

An extension of time to complete an assignment may be granted by the Lecturer-in-charge in case of misadventure or illness. Applications for an extension should be made to the Lecturer-in-Charge by email or in person before the due date. You will be required to substantiate your application with appropriate evidence such as medical certificates, accident reports etc. Please note that workload, work commitments and computer failures are usually considered insufficient grounds for an extension.

#### **4.6 Protocol for viewing final exam scripts**

The School of Information Systems and Technology Management (ISTM) has set a protocol under which students may view their final exam script. ISTM exam script viewing day is usually a day after the official release of results. Details will be posted on both the school website and on your course Moodle.

##### **Quality Assurance**

The Business School is actively monitoring student learning and quality of the student experience in all its programs. A random selection of completed assessment tasks may be used for quality assurance, such as to determine the extent to which program learning goals are being achieved. The information is required for accreditation purposes, and aggregated findings will be used to inform changes aimed at improving the quality of Business School programs. All material used for such processes will be treated as confidential.

## 5 COURSE RESOURCES

The required materials for this course are:

Dennis, Wixom, and Tegarden (2015). *Systems Analysis and Design with UML Version 2.0 (Fifth edition)*. Wiley.

A Guide to the Business Analysis Body of Knowledge (BABOK Guide) version 3.0, *International Institute of Business Analysis*. (URL: <http://www.iiba.org/babok-guide.aspx>)

Agile Extension to the BABOK Guide version 1.0, *International Institute of Business Analysis*. (URL: <http://www.iiba.org/BABOK-Guide/Agile-Extension-to-the-BABOK-Guide-IIBA.aspx> )

The website for this course is on Moodle at:  
<http://moodle.telt.unsw.edu.au>.

## 6 COURSE EVALUATION AND DEVELOPMENT

Each year feedback is sought from students and other stakeholders about the courses offered in the School and continual improvements are made based on this feedback. UNSW's myExperience survey is one of the ways in which student evaluative feedback is gathered. In this course, we will seek your feedback through myExperience survey at the end of the course. Feedback from previous students indicated that longer tutorials and shorter lectures were more desirable in terms of content delivery and a focus on new age systems development methodologies was desirable. As a result of this feedback, we have now revised the course structure to include 1-hour lectures and 2-hour tutorials. We have also revised the course content to incorporate contemporary business analysis methods with an emphasis on Agile and Design thinking methods.

## 7 COURSE SCHEDULE

### Lecture Schedule

Lectures start in Week 1 and finish in Week 12.

LECTURE SCHEDULE		
Week	Topic	References
Week 1 24 July	Introduction to Business Analysis	Refer to Moodle
Week 2 31 July	Traditional approaches to Requirements Determination	Dennis, Wixom & Tegarden
Week 3 7 August	Traditional approaches to Analysis Modelling: Business Process & Functional Modelling with UML	Dennis, Wixom & Tegarden
Week 4 14 August	Traditional approaches to Analysis Modelling: Structural Modelling with UML	Dennis, Wixom & Tegarden
Week 5 21 August	Traditional approaches to Analysis Modelling: Behavioural Modelling with UML	Dennis, Wixom & Tegarden
Week 6 28 August	Traditional approaches to Design Modelling: HCI & Physical Architecture Layer Design	Dennis, Wixom & Tegarden
Week 7 4 September	Contemporary approaches to Business Analysis: Agile Development I  (Group Assignment Part A Due: 8 <sup>th</sup> September 11:55 PM)	Refer to Moodle
Week 8 11 September	Contemporary approaches to Business Analysis: Agile Development II	Refer to Moodle
Week 9 18 September	Contemporary approaches to Business Analysis: Agile Development III	Refer to Moodle
Mid-semester break: 23 September – 2 October inclusive (2 Oct = Labour Day Public Holiday)		
Week 10 3 October	Contemporary approaches to Business Analysis: Design Thinking I	Refer to Moodle
Week 11 9 October	Contemporary approaches to Business Analysis: Design Thinking II	Refer to Moodle
Week 12 16 October	Course Review  (Group Assignment Part B Due: 20 <sup>th</sup> October 11:55 PM)	
Week 13 23 October	NO LECTURE	

## Tutorial Schedule

Tutorials start in Week 2 and finish in Week 13.

TUTORIAL SCHEDULE		
Week	Topic	References
Week 1 24 July	NO TUTORIAL	
Week 2 31 July	Business Analysis Case Study: Contrasting Traditional and Contemporary Approaches	Pre-workshop reading and Lecture Notes
Week 3 7 August	Requirements Determination	Pre-workshop reading and Lecture Notes
Week 4 14 August	Business Process & Functional Modelling with UML	Pre-workshop reading and Lecture Notes
Week 5 21 August	Structural Modelling with UML	Pre-workshop reading and Lecture Notes
Week 6 28 August	Behavioural Modelling with UML	Pre-workshop reading and Lecture Notes
Week 7 4 September	HCI & Physical Architecture Layer Design	Pre-workshop reading and Lecture Notes
Week 8 11 September	Agile Development Workshop I	Pre-workshop reading and Lecture Notes
Week 9 18 September	Agile Development Workshop II	Pre-workshop reading and Lecture Notes
Mid-semester break: 23 September – 2 October inclusive (2 Oct = Labour Day Public Holiday)		
Week 10 3 October	ONLINE TUTORIAL – Agile Development Workshop III	Pre-workshop reading and Lecture Notes
Week 11 9 October	Design Thinking Workshop I	Pre-workshop reading and Lecture Notes
Week 12 16 October	Design Thinking Workshop II	Pre-workshop reading and Lecture Notes
Week 13 23 October	Team Presentations	NA