UNSW Business School

School of Information Systems and Technology Management

INFS3634
Mobile Applications Development

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

Lecturer-in-charge: Dr Michael Cahalane
Room 2085
Email: m.cahalane@unsw.edu.au
Consultation Time: Wednesdays 10:00-12:00 (or by appointment)

A full list of tutors will be posted on Course Website.

2 COURSE DETAILS

2.1 Teaching Times and Locations

Lectures start in Week 1(to Week 12): The Time and Location are:
Wednesday 09:00 – 10:00 at UNSW Business School 216 (K-E12-216)

Tutorials start in Week 2 (to Week 13). The Time and Location are:
Wednesday 12:00 – 14:00 at Quadrangle G021 (K-E15-G021)

2.2 Units of Credit

The course is worth 6 units of credit.

2.3 Summary of Course

This is a Level 3 Information Systems (IS) course that continues your study of IS by furthering your knowledge and skills in relation to mobile application development. Continuing from INFS2605, this course focuses on the development of software applications using the Android platform. During lectures will be provided with an overview of mobile programming concepts and tools, and engage in case studies with regards to mobile App development and the current mobile market. During the weekly practical tutorials, students will use the Android Studio Integrated development environment (IDE) in learning how to design and develop a range of mobile applications. Students will be required to evaluate the quality of their own, and peers', coding solutions.

2.4 Course Aims and Relationship to Other Courses

This course is offered as a third-year elective from the School of Information Systems and Technology Management. A central aim of this course is to provide students with a foundational understanding of the technologies, methods and skills required to design and develop apps on the Android platform. This course aims to provide students with various concepts and skills that are essential in careers such as project designers and software developers. This course builds on from INFS1609/INFS2609 and INFS2605 and provides learning material useful for student's project work in INFS3605.

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:

1. Demonstrate your ability to interpret, write and distribute reliable, well-structured mobile applications
2. Plan and reflect on your learning process associated with mobile application development
3. Comprehend, discuss and apply best practices for mobile application development
4. Comprehend, discuss and apply software testing methods in developing mobile apps
5. Demonstrate ability to work collaboratively in the design and development of mobile applications

The Learning Outcomes in this course also help you to achieve some of the overall Program Learning Goals and Outcomes for all undergraduate coursework 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**
This course helps you to achieve the following learning goals for all Business undergraduate postgraduate coursework [delete one] students:		*On successful completion of the course, you should be able to:*	*This learning outcome will be assessed in the following items:*
1	Knowledge	Demonstrate your ability to interpret, write and distribute reliable, well-structured mobile applications Comprehend, discuss and apply best practices for mobile application development Comprehend, discuss and apply software testing methods in developing mobile apps	• Tutorials • Individual Assignment • Group Assignment • Exam
2	Critical thinking and problem solving	Demonstrate your ability to interpret, write and distribute reliable, well-structured mobile applications Comprehend, discuss and apply best practices for mobile application development	• Tutorials • Group Assignment • Exam

		Comprehend, discuss and apply software testing methods in developing mobile apps. Demonstrate ability to work collaboratively in the design and development of mobile applications	
3a	Written communication	Demonstrate your ability to interpret, write and distribute reliable, well-structured mobile applications. Plan and reflect on your learning process associated with mobile application development.	• Tutorials • Group Assignment • Exam
3b	Oral communication	Comprehend, discuss and apply best practices for mobile application development. Demonstrate ability to work collaboratively in the design and development of mobile applications.	• Group Assignment
4	Teamwork	Plan and reflect on your learning process associated with mobile application development. Demonstrate ability to work collaboratively in the design and development of mobile applications.	• Group Assignment
5a	Ethical, social and environmental responsibility	Not specifically addressed in this course	
5b	Social and cultural awareness	Not specifically addressed in this course	

3 LEARNING AND TEACHING ACTIVITIES

3.1 Approach to Learning and Teaching in the Course

At university, learning is focused on a self-directed search for knowledge. Lectures, tutorials, and various (online and offline) resources associated with this course all facilitate this process. This approach to learning is particularly important within the context of this course, whereby students need to not only develop their programming skills, but also their competency to think “like a programmer’ and engage in focused, deep work practices.

To begin the learning process set out in this course, students will need to prepare themselves by revising their knowledge and skills relating to Java programming developed throughout INFS1609 and INFS2605. Students will need create and engage with their own revision plan. Students facing difficulties with this preparation work should contact their INFS3634 lecturer.

The weekly **lectures** and **tutorials** for this course have been scheduled for Wednesday mornings. Typically, topics discussed in the lecturer (09:00-10:00), will be expanded upon in the following tutorial (12:00-13:00).

Each week, the lecturer will begin by reviewing and clarifying material previously covered. The lecturer will then introduce a new topic, highlighting relevant study material (e.g. texts, videos, etc.) and presenting students with programming exercises to be completed in the following tutorial. On occasion, the lecturer will use the lecture time to pose questions to students and hold class discussions and debates on topics covered.

This course requires considerable out-of-class reading and viewing or resource material as well as programming exercises. The relevant study material, to be viewed in your own time, provides more detail about the topics introduced in the lecture. It is expected that you will spend approximately 10 hours per week studying/programming for this course. This time should be made up of reading, revision, working on exercises and problems, and attending classes (lectures and tutorials). In periods where you need to complete assignments or prepare for presentations, the workload may be greater.

The **tutorials** will be used to reinforce and apply material covered in lectures and study material. Tutorials are an important part of your learning for INFS3634; therefore, being prepared for your tutorials is essential. Student should routinely check what material they are expected to read/complete prior to each session. This includes completing any activities you have been asked to do in preparation for your next tutorial. Tutorials also give you the opportunity to discuss your work with fellow students, and hence gain an indication of your own progress. Students should also use their tutorials time to ask questions for clarifications on the material covered in class as well as their study material.

3.2 Learning Activities and Teaching Strategies

As this is the second year of running INFS3634, we will continue to experiment with a combination of technologies in enhance sharing, communication, collaboration, and reflection within and outside of the class. This includes tools such as Moodle, Socrative, Lynda, Youtube, Slack, and Trello. Students will also employ practices such as pair-programming, presenting on their group work, as well as peer-evaluations and reviews. Students are responsible for checking Moodle for announcements on a regular basis.

4 ASSESSMENT

4.1 Formal Requirements

In order to pass this course, you must:

- achieve a composite mark of at least 50;
- attend 80% of your classes; and
- make a satisfactory attempt at all assessment tasks (see below). This can be interpreted as attaining a mark of **45%** or more in each assessment item.

4.2 Assessment Details

Assessment Task	Weighting	Length	Due Date
Tutorial Preparation and Participation	10%	See Below	Weekly (2-13)
Individual Assignment (Quiz)	20%	See Below	Week 8, 13th September
Group Assignment	30%	See Below	Submission and Presentation Week 12, 18th October. Peer Review Due Week 13, 25th of October
Final Exam	40%	TBA	University Exam Period
Total	100%		

Tutorial Preparation and Participation (10%)
Tutorials will be used to reinforce material covered in lectures as well as study material. Each tutorial will involve a number of problems/exercises which relate to a given topic. During weeks 2-13, active participation in tutorials is included as part of student assessment for INFS3634.

Active participation includes, but is not limited to: providing programming solutions for exercises; working in an assigned group; engaging in tutorial discussions; asking and answering questions; and taking notes. Students will also be required to sign an attendance sheet each week.

Please note: All students are expected to be punctual and to adhere to their allocated tutorial times. Latecomers may not be awarded an assessment mark. Students are required to prepare for each tutorial and the tutorial will require your full participation. Students who are not prepared for a tutorial and/or are not fully engaged during the tutorial itself (e.g. occupied with social networking, surfing the web, checking mail, etc.) may not be awarded an assessment mark or may receive a partial mark.

Individual Assignment (20%)
The individual assignment for INFS3634 will comprise of a multiple-choice-question (MCQ) quiz. The content of this quiz will focus on material covered in weeks 1-7. This quiz is designed is make sure that students are actively engaging with the reading material and tutorial work covered during the first half of the semester. The time and location for the quiz will be announced in class and on Moodle.

Group Assignment and Presentation (30%)
The group assignment for INFS3634 will comprise 3 parts. The first part is that of an app design-solution for a real-world business problem. As part of the group assignment, groups will also be required to present a brief presentation to the class in Week 12 AND submit a peer review in Week 13. Detailed specifications for the assignments, including format, will be provided to students in Week 8 of the course. This will include a marking rubric for the assignment.

General Information on Group Assignment Submissions
Submission of group assignments must be accompanied by a **SIGNED** cover page provided on Moodle. Digital signatures are **NOT** allowed. Signature on the cover page

MUST MATCH the one you signed for your workshop attendance. Missing cover page or cover page without proper signature will result in an automatic penalty of 10% of the maximum marks available for the assignment.

Students that commit to a group and then do not honour their commitments will lose marks. Group members are expected to work in a harmonious and professional way. This includes appropriate management of non-performing members and conflict management. A group 'leader' may be selected to help organise group activities, but the responsibility for the group's performance falls on all its members.

You are to report any problems to the lecturer-in-charge as early as possible. Confidential peer assessments may be used for group assignments if individual contributions vary significantly. The lecturer-in-charge will have the final discretionary authority to alter individual marks, based on information provided in the peer assessments and/or direct consultation with involved parties.

Group assignments in INFS3634 are all subject to peer assessment. Each member of the group must submit a peer assessment form (properly filled in and SIGNED) at the time of submission for each assignment. Any claims of unequal contribution in the peer assessment form **MUST BE** backed with supporting documentation (or evidence) (e.g., 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 Exam (40%)
A final programming examination will take place during the University Exam Period. The examination time will be announced in Week 1. The examination is worth 40% of the total marks for this course. Candidates may not bring any course materials to the examination. The examination paper may not be retained by the candidate. Further information regarding the exam will be provided in-class and on moodle.

4.3 Special Consideration, Late Submission and Penalties

For information on Special Consideration please refer to the Business School's Course Outlines Policies webpage**.**

It is a student's responsibility to adhere to the procedures for submission of assignments otherwise a penalty may apply. The key requirements are:

The individual and group assignments shall be submitted as indicated in the course schedule and according to the instructions of the lecturer-in-charge.

The late submission of assignments carries a penalty of 10% of the maximum marks for that assignment per day of lateness (including weekends and public holidays), unless an extension of time has been granted. For example, an assignment worth 30% will attract a 3-mark penalty per day. An extension in the time of submission will only be granted by the lecturer-in-charge for exceptional circumstances, such as misadventure or illness. Applications should be made to the lecturer-in-charge by email or in person. You will be required to substantiate your application with appropriate documentary evidence such as medical certificates, accident reports etc. Please note that work commitments and computer failures are usually considered insufficient grounds for an extension.

Partial submissions of your assignment work will not be accepted.

4.4 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

There is no prescribed textbook for this course. The website for this course is on Moodle at: http://moodle.telt.unsw.edu.au.

Suggested reading:

Android Programming: The Big Nerd Ranch Guide (Big Nerd Ranch Guides) 3rd Edition by Bill Phillips, Christ Stewart and Kristin Marsicano.

The following websites are also useful sources:

- https://developer.android.com/index.html
- http://stackoverflow.com
- https://student.unsw.edu.au/lynda

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 at the end of the semester. In addition, throughout the semester we will use the Socrative App to gage students understanding of topics as well as receive general feedback on material covered in lectures and tutorials.

7 COURSE SCHEDULE

COURSE SCHEDULE			
Week	**Lecture Topic**	**Tutorial Topic**	**Other Activities/ Assessment**
Week 1 24 July	Introduction to INFS3634	**NO TUTORIAL**	
Week 2 31 July	Android Fundamentals	User Interface	
Week 3 7 August	Android Fundamentals	User Interface	
Week 4 14 August	Designing Interactive Apps	User Input	
Week 5 21 August	Designing Interactive Apps	User Input	
Week 6 28 August	Activities and Intents	Multi-Screen Apps	
Week 7 4 September	Activities and Intents	Multi-Screen Apps	
Week 8 11 September	JSON and HTTP Networking	Networking Apps	**Individual Assignment (Quiz)**
Week 9 18 September	Threads and Parallelism	Networking Apps	
Mid-semester break: 23 September – 2 October inclusive (2 Oct = Labour Day Public Holiday)			
Week 10 3 October	SQLite and Android	Database Apps	
Week 11 9 October	Content Providers	Database Apps	
Week 12 16 October	Course Summary	**Group Presentations**	**Group Assignment Submission**
Week 13 23 October	**NO LECTURE**	Revision	**Submission of Peer Review for Group Assignment**