Course Directive
IN721: Design and Development of Applications for Mobile Devices
Semester Two, 2020

Course Information

Credits:	15 Credits
Prerequisite:	IN610: Programming 3
Timetable:	Wednesday 8 am D312 & Wednesday 10 am D201

Lecturer

Name:	Grayson Orr (Lecturer)
Location:	D311
Email:	grayson.orr@op.ac.nz

Course Dates

Term 1:	20 July - 25 September (10 weeks)
Mid Semester Break:	28 September - 9 October (2 weeks)
Term 2:	12 October - 20 November (6 weeks)

Aims

To explore the design and implementation of applications for mobile devices.

Learning Outcomes

At the successful completion of this course, students will be able to:

1. Implement complete, non-trivial, industry-standard mobile applications following sound architectural and code-quality standards.
2. Explain relevant principles of human perception and cognition and their importance to software design.
3. Identify relevant use cases for a mobile computing scenario and incorporate them into an effective user experience design.
4. Follow industry standard software engineering practice in the design of mobile applications.

Resources

Software

This paper will be taught using **Android Studio** & **Visual Studio Code**. An installer for **Android Studio** & **Visual Studio Code** is available. See https://developer.android.com/studio & https://code.visualstudio.com. Please refer any problems with downloads or installers to **Rob Broadley** in **D205a**.

Readings

There is no textbook for the course.

Provisional Schedule

Week	Date	Session
1	20-07-2020	Kotlin 1: Introduction to Android OS, Kotlin, Android Studio, Activity Lifecycle & Intent
2	27-07-2020	Kotlin 2: Material Design, AsyncTask & RecyclerView
3	03-08-2020	Kotlin 3: Parcelable, CardView, SearchView & SharedPreferences
4	10-08-2020	Kotlin 4: ProgressDialog, WebView, Fragment & DialogFragment
5	17-08-2020	Kotlin 5: SQLite & Location
6	24-08-2020	Project Work
7	31-08-2020	Project Work
8	07-09-2020	Project Work
9	14-09-2020	Project Work
10	21-09-2020	React Native 1: Introduction to React Native, Expo & JSX
Mid Term Break		
11	12-10-2020	React Native 2: Components, Props & State
12	19-10-2020	React Native 3: State Management & Lifecycle Methods
13	27-10-2020	React Native 4: Axios & Async/Await
14	02-11-2020	Project Work
15	09-11-2020	Project Work
16	16-11-2020	Project Work

Assessments

Assessment	Weight	Due Date	Learning Outcomes
Practicals	10%	11-11-2020	1, 3, 4
Kotlin Travelling App	35%	14-10-2020	1, 3, 4
React Native Social Game App	25%	18-11-2020	1, 3, 4
Kotlin Exam	15%	21-09-20	2, 3, 4
React Native Exam	15%	09-11-20	2, 3, 4

Course Requirements and Expectations

Learning Hours

This course requires 150 hours of learning. This time includes 64 hours of timetabled class time, and 86 hours of self-directed reading, preparation and completion of assessment work.

Criteria for Passing

To pass this paper, you must achieve an overall average of 50%. There must be a genuine attempt at all assessments. There are no resits.

Attendance

- Students are expected to attend all classes, both lectures and labs.
- If you miss a class, you will need to get notes from another student.
- If you cannot attend for a few days for any reason, please contact your lecturer.
- You must turn up ready for assessments on the due date and at the correct time. No extra time will be scheduled. If you do not turn up, you have failed the assessment.

Communication

Microsoft Outlook and Teams are the official communication channels. It is your responsibility to regularly check Microsoft Outlook/Teams and GitHub for important course-related material, including changes to class scheduling or assessment details. Not checking will not be accepted as an excuse.

Snow Days/Polytechnic Closure

In the event the Polytechnic is closed or has a delayed opening because of snow or bad weather, you should not attempt to attend class if it is unsafe to do so. It is possible that your lecturer will not be able to attend either, so classes will not physically be meeting. However, this does not become a holiday. Rather, the material will be made available on GitHub for classes affected by the closure. You are responsible for any material presented in this manner. Information about closure will be posted on the Otago Polytechnic Facebook page https://www.facebook.com/OtagoPoly.

Group Work and Originality

Students in the Bachelor of Information Technology degree are expected to hand in original work. Students are encouraged to discuss assessments with their fellow students, however, all assessments are to be completed as individual works unless group work is explicitly required (i.e. if it doesn't say it is group work then it is not group work – even if a group consultation was involved). Failure to submit your original work will be treated as plagiarism.

Referencing

Appropriate referencing is required for all work. Referencing standards will be specified by your lecturer.

Plagiarism

Plagiarism is submitting someone else's work as your own. Plagiarism offences are taken seriously and an assessment that has been plagiarised may be awarded a zero mark. A definition of plagiarism is in the Student Handbook, available online or at the school office.

Submission Requirements

All assessments are to be submitted by the time, date, and method given when the assessment is issued. Failure to meet all requirements may result in a penalty of up to 10% per day (including weekends).

Extensions

Extensions are only available for unusual circumstances. These must be applied for, and approved, before the submission deadline.

Impairment

In case of sickness contact your lecturer or BIT Team Leader (Michael Holtz) as soon as possible, preferably before the assessment or exam is due. The policy regarding the granting of a mark that considers impaired performance requires a medical certificate and a medical practitioner's signature on a form. You may refer to the guide on impaired performance on the student handbook.

Appeals

If you are concerned about any aspect of your assessment, please approach the lecturer in the first instance. We support an open-door policy and aim to resolve issues promptly. Further support is available from the BIT Team Leader (Michael Holtz) and Head of College (Richard Nyhof). Otago Polytechnic has a formal process for academic appeals if necessary.

Other Documents

Regulatory documents relating to this course can be found on the Polytechnic website.