# CIS*4030 Mobile Computing
## 0.50 Credits – Undergraduate – Winter 2022
## School of Computer Science – University of Guelph

**Lectures:** Tuesdays (MCKN 121) & Thursdays (AD-S Virtual), 4pm-5:20pm

| **Instructor Details:** | **Teaching Assistant Details:** |
|---|---|
| David Flatla dflatla@uoguelph.ca | Connor *cis4030@socs.uoguelph.ca* |
| Office hours: Fridays 1pm-3pm (by appt) | Protim *cis4030@socs.uoguelph.ca* |

**Course Website:** https://courselink.uoguelph.ca/d2l/home/736806
The course website will be used to post any materials, announcements, and assignment specifications and grades. You are responsible for checking this site regularly.

**Textbook:** *Beginning App Development with Flutter: Create Cross-Platform Mobile Apps* (1st Edition) by Rap Payne. This book will be available electronically via the UoG Library.

**Course Prerequisites:** CIS*2030, CIS*2750, CIS*3110

**Course Description:** This course introduces students to mobile computing and mobile application development. It examines mobile technology, application development, user interaction, data storage, and software tools.

**Semester Plan:** My goal for CIS*4030 this semester is to be predictable and reasonable. At the start of term, you will find a group of five (you + 4 others) and will work with that same group all semester. Your group will be responsible for a substantial mobile application project using the Flutter cross-platform toolkit. In addition to your group work, you will also do individual labs each Thursday to help you learn the fundamentals of Flutter development. Tuesdays are the only 'in-person' (except for the first two weeks of term) component of the course, but will be hybrid (i.e., broadcast on Zoom) throughout the semester, and will largely be Q&A sessions for helping with your projects and labs. Thursday labs will be synchronous virtual on Zoom. All submissions and feedback will be electronic. There will be no midterm or final exam.

**Course Objectives:** The purpose of this course is to help you become familiar with the technical skills and experience necessary to be competitive for an entry-level cross-platform Mobile Developer job. To build this expertise, you will become an expert in Flutter (a cross-platform toolkit) development during weekly labs and demonstrate that expertise by building a substantial Flutter mobile application with your group. The goal of the project is to have it releasable on the mobile app stores by the end of the course.

## COURSE PLAN
*Groups*: There are 80 students in CIS*4030, so groups of 5 makes 16 groups. The same groups will be used for the entire course. Group membership is due 14 January. Having at least one group member with a Mac will allow your group to test iOS emulators. Part of lecture time on Thursday 13 January will be reserved for you to formalize your group membership, however, please feel free to pre-arrange your groups using this GSheet:
https://docs.google.com/spreadsheets/d/15Xam_MQclKguF_5grOsy6L0dEQFVEnX4Iqt6WKhPbWs/edit?usp=sharing

*Individual Labs:* Each Thursday (starting 20 January) during the scheduled lecture time, you will work on a lab exercise that introduces a core component of Flutter. We will release the lab specification prior to lecture, and you will submit your solution the Wednesday evening prior to the next Thursday lecture (so you have one week to complete each lab). There will be 10 of these (20 January – 31 March, inclusive), each worth 4% for a total of 40% of your course grade. You will complete these labs individually.

*Group Project*: Over the course of the semester, you will complete a major mobile app development project using Flutter. Your submission will comprise three Milestone submissions (Milestone 1 [15%] due 01 Feb, Milestone 2 [20%] due 08 Mar, and Milestone 3 [25%] due 07 Apr). Milestone 1 will be 'idea pitch + initial interface design (e.g., sketch/mockup screens and navigation)'. Milestone 2 will be 'interface coded + early middleware/backend' (e.g., real screens that exhibit true navigation, but faked logic/backend). Milestone 3 will be the full app with a live demonstration. I encourage you to test your designs for feedback from people outside the project team. The milestone submissions will generally comprise your codebase (not for M1), a report, and a demo, but a complete specification will be released soon.

**Grading Scheme:**
- Individual Flutter Labs [10 in total] = 40% (4% each)
- Group Mobile Project:
  - Milestone 1 (15% - idea pitch in class + initial interface design). Report due 11:59pm Tuesday 01 February 2022 (same day as the in-class presentations).
  - Milestone 2 (20% - interface implementation + in-class demo). Report + Code due 11:59pm Tuesday 08 March 2022 (same day as the in-class demos).
  - Milestone 3 (25% - full implementation + in-class demo). Report + Code due 11:59pm Thursday 07 April 2022 (same day as the in-class demos).

Your final grade will be the weighted average of your grades for the above components.

**Course Schedule:**

| Week (Monday) | Tuesday | Thursday | Lab Due Date | Project Deadlines |
|---|---|---|---|---|
| 00 (10 Jan) | Course Intro | Form Groups | -- | 14 Jan (groups) |
| 01 (17 Jan) | Q&A | Lab01 | 11:59pm 26 Jan | -- |
| 02 (24 Jan) | Q&A | Lab02 | 11:59pm 02 Feb | -- |
| 03 (31 Jan) | M1 Demo | Lab03 | 11:59pm 09 Feb | 01 Feb (Milestone 1) |
| 04 (07 Feb) | Q&A | Lab04 | 11:59pm 16 Feb | -- |
| 05 (14 Feb) | Q&A | Lab05 | 11:59pm 02 Mar | -- |
| WB (21 Feb) | Winter Break | -- | -- | |
| 06 (28 Feb) | Q&A | Lab06 | 11:59pm 09 Mar | -- |
| 07 (07 Mar) | M2 Demo | Lab07 | 11:59pm 16 Mar | 08 Mar (Milestone 2) |
| 08 (14 Mar) | Q&A | Lab08 | 11:59pm 23 Mar | -- |
| 09 (21 Mar) | Q&A | Lab09 | 11:59pm 30 Mar | -- |
| 10 (28 Mar) | Q&A | Lab10 | 11:59pm 06 Apr | -- |
| 11 (04 Apr) | Q&A | M3 Demo | -- | 07 Apr (Milestone 3) |

**Additional Notes:**
- First day of classes is Monday, 10 January 2022.
- First lecture is Tuesday, 11 January 2022.
- We will use Thursday, 13 January 2022 to generate groups and project ideating.
- Group composition is due 14 January 2022.
- Tuesday, 18 January 2022 will be the first Q&A lecture.
- Flutter labs will begin Thursday, 20 January 2022.
- Flutter labs are due 11:59pm Wednesday immediately before the next Thursday lab.
- M1 demos (presentations) will be in-class on Tuesday, 01 February 2022.
- Winter break (no classes or labs) is 21-25 February 2022.
- M2 demos will be in-class on Tuesday, 08 March 2022.
- M3 demos will be in-class on Thursday, 07 April 2022.
- Last day of classes is Friday, 08 April 2022.
- There is no midterm exam and no final exam for this course.

**Late Policy:**

Individual labs cannot be extended past the next lab, as a full solution for the previous lab will often be provided with each new lab specification. Project Milestone presentations/demos likewise cannot be extended as they are scheduled for specific lecture days.

However, the Project Milestone submissions (codebase [not M1] and report) are hereby automatically granted a three-day extension, such that only submissions submitted 72 hours after the regular deadline will be graded late (receiving a grade of '0'). As such, the latest deadline for the M1 submission is 11:59pm Friday 04 February 2022, the latest deadline for the M2 submission is 11:59pm Friday 11 March 2022, and the latest deadline for the M3 submissino is 11:59pm Sunday 10 April 2022. PLEASE DO NOT request this extension. We will apply it automatically.

**Communication (i.e., How to get help…)**

As per university regulations, all students are required to check their *uoguelph.ca* account regularly. E-mail is the official route of communication between the University and students.

The best way to get help is to ask during lectures and labs. Failing that, please reach out to the TAs (email above) or me (email above) to discuss further or book a meeting. The 2170 TA email address (listed at the top of this document) must be used for all email correspondence with the TAs. Only the instructor and TAs have access to this email account.

I get a lot of email, so please state the course title and your name in any correspondence you send me. If you send me a question that is answerable elsewhere (e.g., Google, course readings, peers, Course Outline, any other resource besides me), I will redirect you instead of answering your question. Please be respectful in all email correspondence. I will do the same.

**When You Cannot Meet a Course Requirement:**

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons, please advise the course instructor in writing, with your name, id#, and e-mail contact. See the undergraduate calendar for information on regulations and procedures for Academic Consideration.

**Drop Date:**

Courses that are one semester long must be dropped by the end of the last day of classes. The regulations & procedures for dropping courses are available in the Undergraduate Calendar: https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-drop.shtml

**Copies of out-of-class assignments:**

Keep reliable back-up copies of any work that you do in the course; you may be asked to resubmit your work at any time.

**Accessibility:**

The University promotes the full participation of students who experience disabilities in their academic programs. To that end, the provision of academic accommodation is a shared responsibility between the University and the student.

When accommodations are needed, the student is required to first register with Student Accessibility Services (SAS). Documentation to substantiate the existence of a disability is required, however, interim accommodations may be possible while that process is underway. Accommodations are available for both permanent and temporary disabilities. It should be noted that common illnesses such as a cold or the flu do not constitute a disability.

Use of the SAS Exam Centre requires students to make a booking at least 14 days in advance, and no later than November 1 (fall), March 1 (winter) or July 1 (summer). Similarly, new or changed accommodations for online quizzes, tests and exams must be approved at least a week ahead of time. More information is available at: http://www.uoguelph.ca/sas

**Academic Misconduct:**

The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community – faculty, staff, and students – to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection.

Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor. The Academic Misconduct Policy is detailed in the Undergraduate Calendar: http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml

**Recording of Materials:**

Presentations which are made in relation to course work—including lectures—cannot be recorded or copied without the permission of the presenter, whether the instructor, a classmate or guest lecturer. Material recorded with permission is restricted to use for that course unless further permission is granted.

**Resources:**

The Academic Calendars are the source of information about the University of Guelph's procedures, policies and regulations which apply to undergraduate, graduate and diploma programs: http://www.uoguelph.ca/registrar/calendars/index.cfm?index

**Illness:**

Medical notes will not normally be required for singular instances of academic consideration, although students may be required to provide supporting documentation for multiple missed assessments or when involving a large part of a course (e.g., final exam or major assignment).

**Disclaimer:**

Please note that the ongoing COVID-19 pandemic may necessitate a revision of the format of course offerings, changes in classroom protocols, and academic schedules. Any such changes will be announced via CourseLink and/or class email. This includes on-campus scheduling during the semester, midterms, and final examination schedules. All University-wide decisions will be posted on the COVID-19 website (https://news.uoguelph.ca/2019-novel-coronavirus-information/) and circulated by email.

For information on current safety protocols, please follow these links: https://news.uoguelph.ca/return-to-campuses/how-u-of-g-is-preparing-for-your-safe-return/ https://news.uoguelph.ca/return-to-campuses/spaces/#ClassroomSpaces

Please note, these guidelines may be updated as required in response to evolving University, Public Health, or government directives.