



COMP 1601 A Winter 2019

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Instructor: Louis Nel (<http://www.scs.carleton.ca/%7Eldnel>)

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USEFUL LINKS:

culearn (<http://www.carleton.ca/culearn>)

ANDROID:

developer.android.com (<https://developer.android.com/develop/index.html>)

android classes API (<https://developer.android.com/reference/classes.html>)

java 8 API (<https://docs.oracle.com/javase/8/docs/api/>)

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COMP 1601 Introduction to Mobile Application Development

COURSE OUTLINE

Lectures/Tutorials	Tue, Thu 10:00-12:00 Canal Building CB 2202
Tutorials	-same as lectures
Instructor	Louis Nel (http://www.scs.carleton.ca/~ldnel)
TA's	see TA's, Office Hours section

Calendar Description:

Introduction to developing mobile applications using the Mac OS X platform. Topics include: the Objective-C programming language; development tools; framework API's; and the Quartz graphic system. Extensive practical experience with development for Apple mobile devices such as the iPhone. Includes: Experiential Learning Activity

Prerequisite(s): one of COMP 1405, COMP 1005, SYSC 1005, ECOR 1606. Lecture/lab four hours a week.

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Course Description:

Despite the current (out of date) calendar description, this course is 50/50 Android and IOS development. The course covers the introductory principles involved in the design and implementation of mobile applications typically on the Android platform (Java) and IOS platform (Swift). An important part of the course is getting comfortable with the primary programming languages Java (android) and Swift (ios) and the development environments in which they are used (Android Studio, XCode). You will also gain experience with the application frameworks and API's of Android and IOS applications. You will need this knowledge for the follow-on mobile development courses.

Topics:

- Java and Swift programming languages
- Android Studio, XCode development environments
- Object-Oriented programming
- Android application architecture and API
- iOS application architecture and API
- XML and JSON data representation
- User interface elements

IMPORTANT NOTE ABOUT SOFTWARE AND COMPUTERS:

This course will be taught as a lab style course based on tutorials rather than lectures. Lab exercises will relate to the homework assignments.

This is a "bring your own device" course where students are REQUIRED to come with a laptop computer capable of running the course software: current MacOS (Catalina), Android Studio 3.5.x and the latest version of XCode. Typically a Macbook with up-to-date Mac OS (Catalina).

Android-based exercises will require an up-to-date Android Studio IDE and Java 1.8 JDK (which runs on all platforms: Windows, Mac, Linux). IOS based exercises will require Apple's XCode IDE and use the Swift programming language. This will require a Mac with latest OS.

Although both environments implement simulators for running apps, and they've gotten better in recent years, you will enjoy things more if you do some testing on a real device (android phone/tablet, iphone/ipad).

Textbook and Notes:

The resources section of the course website will list recommended texts and online resources for various topics. These texts are not mandatory but references will be made to their contents. The recommended books are available in electronic form. We suggest you get the recommended texts if you don't find online resources sufficient.

Online resources will be posted with individual lecture/tutorial material as well. It is expected that the resources will be updated and modified as the course progresses. You are encouraged to contribute to the list of helpful resources.

Course Material Copyright Notice:

We remind you that lectures and course materials, including power point presentations, outlines, code examples, assignments, tutorials and similar materials, are protected by copyright. The professor is typically the exclusive owner of copyright and intellectual property of the course materials unless otherwise noted. You may take notes and make copies of course materials for your own private (educational) use. You may not and may not allow others to reproduce or distribute lecture notes and course materials publicly for commercial, or other, purposes without my express written consent of the author(s).

About sample code:

We often post sample code on the course web site to accompany lecture content or to use as a starting point for tutorials and assignments. Often the sample code is intentionally taken from a recommended text, or online source, so that you can be referred to that source for further explanation. Because of this you need to respect the copyright of those sources as explained below.

You are free to use whatever sample code we post on the course web site as the starting point for your own work intended for submission as course assignments. Assignment submission uploaded to culearn are considered private and not published to the world at large. You may NOT however publish the sample code to the world at large. For example, using sample code from a copyrighted source in a public GitHub repository IS a copyright violation. If you are going to post any code to a public repository like GitHub make sure it is all your own work. GitHub has become a defacto repository used in much software development, however its free accounts might not allow private repositories at this time. Also students have posted content publicly that they meant to be private. Again anything posted publically should NEVER contain content that would represent a copyright violation.

Tutorials:

Lectures/tutorials are compulsory and your participation will count for a large part of your course mark. There will be weekly programming exercises to be completed and demonstrated in class. You must ensure you demonstrate your work to the TA or Prof. before you leave the session to get credit for your work.

Assignments:

We will be using demonstrations and electronic submission of assignments using culearn. (<https://culearn.carleton.ca>) You will be required to demonstrate your assignment code at the tutorials. Code will also be submitted electronically to culearn. Culearn enforces strict deadlines. No assignments will be accepted late or directly by email or in other forms. TA's are instructed not to accept assignments directly.

Teaching Assistants:

Since the TA's will be there at every lecture/tutorial they will not hold other office hours. Some assignments might require demos to the TA's which will be scheduled as needed.

Marking Scheme:

deliverable	value	comment
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Tutorial class exercisers	30%	<p>We will drop the worst 4 marks of the class tutorials. (i.e. count about 80% of the exercises)</p> <p>Your results of the in class exercise must be demonstrated to the TA or Prof. before the end of the class.</p> <p>Your exercise will be given a mark of 0,1 or 2 as follows.</p> <p>0 for no show or no progress. 1 mark for some progress during the exercise period. 2 marks for completion or significant progress.</p> <p>A student who gets a 1 can upgrade their mark by showing the completed exercise at the start of the next class.</p>
Assignments	30%	<p>4 (or possibly 5) assignments equally weighted</p> <p>We will drop your worst assignment mark when computing the grade. (That is, you get one free one.)</p>
Midterm	10%	<p>In class (date TBA). (If your final exam mark is better than the midterm mark, the midterm mark will be replaced by the final exam mark)</p>
Final Exam	30%	<p>Formally scheduled exam during exam period</p>

Missed assignments and tutorials for Medical and other reasons: You may miss up to 4 tutorials, and 1 assignment and the midterm test for medical, compassionate, or other reasons. If you miss more than that a mark of 0 will be used for the missed items when the final grade is computed. We will NOT collect doctor's notes for missed work, but if you miss more than the allowed number a mark of 0 will be used for the missed work.

IMPORTANT: If you wish to appeal a mark (assignment, tutorial, or midterm) you must make the appeal within 10 days of the mark being posted on culearn. After this we will not be obliged to entertain appeals or change marks.

Collaboration is encouraged but cheating, or copying, is not allowed. You may work together and consult but any work you hand in must be your own and judged to be unique. Any two assignments judged to be too similar will both receive a grade of 0, and will be handled as a formal academic offence -see calendar for details.

The TA's will be using the Stanford MOSS (Measure of Software Similarity) system to detect copied work (plagiarism). There is no "statute of limitations" on detecting copying meaning we will run these tests throughout the term and may deduct marks from work that was graded previously.

NEW UNIVERSITY POLICY REGARDING ACADEMIC INTEGRITY

Academic Integrity: Minimum penalties for offences starting 6 January 2020:

First offence, first-year students (< 4.0 cr)	Final grade reduction of one full grade (e.g., A- becomes a B-, if that results in an F, so be it)
First offence, everyone else	F in the course
Second offence	One-year suspension from program

Third offence	Expulsion from the University
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Course Web Page:

As well as being announced in class, all important information, such as course news, assignments, TA hours, instructor office hours, will be available on the course web page at <http://www.scs.carleton.ca/~ldnel/2601winter2020> (<http://www.scs.carleton.ca/~ldnel/2601winter2020>). It is your responsibility to check this web page frequently for new information and announcements. Paper copies of outlines and assignments will not be provided.

Information on University Academic Accommodations:

Requests for Academic Accommodation

You may need special arrangements to meet your academic obligations during the term. For an accommodation request, the processes are as follows:

Pregnancy obligation

Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website: carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf (<https://carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf>)

Religious obligation

Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website: carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf (<https://carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf>)

Academic Accommodations for Students with Disabilities

If you have a documented disability requiring academic accommodations in this course, please contact the Paul Menton Centre for Students with Disabilities (PMC) at 613-520-6608 or pmc@carleton.ca for a formal evaluation or contact your PMC coordinator to send your instructor your Letter of Accommodation at the beginning of the term. You must also contact the PMC no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with your instructor as soon as possible to ensure accommodation arrangements are made. carleton.ca/pmc

Survivors of Sexual Violence

As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence will not be tolerated, and is survivors are supported through academic accommodations as per Carleton's Sexual Violence Policy. For more information about the services available at the university and to obtain information about sexual violence and/or support, visit: carleton.ca/sexual-violence-support (<https://carleton.ca/sexual-violence-support>)

Accommodation for Student Activities

Carleton University recognizes the substantial benefits, both to the individual student and for the university, that result from a student participating in activities beyond the classroom experience. Reasonable accommodation must be provided to students who compete or perform at the national or international level. Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. <https://carleton.ca/senate/wp-content/uploads/Accommodation-for-Student-Activities-1.pdf> (<https://carleton.ca/senate/wp-content/uploads/Accommodation-for-Student-Activities-1.pdf>)

For more information on academic accommodation, please contact the departmental administrator or visit: students.carleton.ca/course-outline (<https://students.carleton.ca/course-outline>)

Student Academic Integrity Policy

Every student should be familiar with the Carleton University student academic integrity policy. A student found in violation of academic integrity standards may be awarded penalties which range from a reprimand to receiving a grade of F in the course or even being expelled from the program or University. Some examples of offences are: plagiarism and unauthorized co-operation or collaboration. Information on this policy may be found in the Undergraduate Calendar, Section 14, Page 59.

Plagiarism

As defined by Senate, "plagiarism is presenting, whether intentional or not, the ideas, expression of ideas or work of others as one's own". Such reported offences will be reviewed by the office of the Dean of Science.

Unauthorized Co-operation or Collaboration

Senate policy states that "to ensure fairness and equity in assessment of term work, students shall not co-operate or collaborate in the completion of an academic assignment, in whole or in part, when the instructor has indicated that the assignment is to be completed on an individual basis". Please refer to the course outline statement or the instructor concerning this issue.