THE UNIVERSITY OF WINNIPEG

APPLIED COMPUTER SCIENCE

Course Number: ACS-1805-050, L-072, L-073
Course Name: Intro to Programming
Course Webpage: https://nexus.uwinnipeg.ca/d2l/home/67776

Instructor Information

Instructor: Samar Sallam
E-mail: sa.sallam@uwinnipeg.ca
Office: 3C07

Office Hours:	Mondays Or by appointment	4:00 – 5:00 pm	In-Person at 3C07
Class meeting time:	Mondays	6:00 – 9:00 pm	3D01
Lab time:	L-072 Fridays	08:30 – 9:45 am	3D03
	L-073 Fridays	09:45 – 11:00 am	3D03

Important Dates

1.	**First Class:**		**Monday, January 13, 2025**
2.	First Lab:		Friday, January 17, 2025
3.	Reading Week (no classes):		February 16-22, 2025
4.	Midterm Exam (in-class):		Monday, March 3, 2025
5.	Final Withdrawal Date w/o academic penalty*:		Friday, March 14, 2025
6.	**Last Class:**		**Monday, April 7, 2025** (make-up for January 6)
7.	Last Lab:		Friday, April 4, 2025
8.	Final Exam:		TBD
9.	Final Exam Period:		April 9-23, 2025
10.	University closures/No Class:	No Class	Monday, January 6, 2025
		Louis Riel Day	Monday, February 17, 2025
		Good Friday	Friday, April 18, 2025

* A minimum of 20% of the work on which the final grade is based will be evaluated and available to the student before the voluntary withdrawal date.

Course Objectives / Learning Outcomes

This course introduces fundamental programming concepts using MIT's App Inventor (MIT AI). Students learn to develop and test programs that can run on Android phones and tablets. Fundamental topics include app architecture, software engineering principles, variables, functions, decision structures, iteration, lists, procedures, databases, user interface, events, and sensors.

The programming environment we use for this course is MIT AI. MIT AI runs on an internet browser on Windows, Macintosh, and Linux computers. MIT AI is a user-friendly visual programming environment for creating Android applications. It employs a drag-and-drop interface for designing apps and a blocks-based language for defining behaviour. With real-time testing on Android and iOS (Apple) devices, students can quickly iterate and debug their creations. MIT AI is particularly popular in education, offering a hands-on approach to programming concepts through its intuitive design and diverse set of built-in components.

Free access to MIT AI and other MIT AI resources can be found at https://appinventor.mit.edu/.

Evaluation Criteria

Students should contact the instructor as soon as possible if extenuating circumstances require missing a lab, assignment, test or examination. A medical certificate from a practicing physician may be required before any adjustments the grading scheme are considered.

1. Labs (15%)
   - Based on best 10 of 11 labs, worth 1.5% each.
   - Labs are to be worked on during the Friday lab period and completed/submitted to Nexus no later than 11:59 pm on that day.
   - No late lab submissions will be accepted.

2. Assignments (15%)
   - 3 assignments, worth 5% each.
   - Individual due dates will be posted on Nexus.
   - Assignments will be accepted up to 1 day late with a 20% penalty.

   More Information on Lab/Assignment submissions:

   Assignments and labs are to be submitted through Nexus. All coding is to be submitted in *.aia format, and any written work in pdf format. Further details and submission procedures will be stated in each lab/assignment.

   Assignments that do not meet all the requirements, including those for the submissions, may not be accepted or a portion of the marks will be deducted. Marks will be deducted for not following the file submission format, file naming format and instruction in the

assignment. Students are responsible for backing up and protecting their lab and assignment work.

Assignments are to be done as individual work and not in groups.

Over the course of the semester two *'life happens'* days are given to all students to use as they see fit, to submit assignments later than the posted due date. Use this extension wisely as I will give no additional extensions, unless in extreme documented situations (e.g., admission to hospital, death in family, etc.). Please note:

- This policy only applies to assignments, and not the labs.
- You may use all 2 days for one assignment or use 1 day for each of two assignments.
- *You do not have to ask for permission to use one or both extensions. You must, however, inform your instructor via email prior to the assignment deadline.*

3. Midterm Test (25%)
   - During the regular class time (March 3, 2025).
   - 1 hour and 15 minutes in duration.

4. Final Exam (45%)
   - Cumulative (the final exam covers all material discussed in the course).
   - 2 hours in duration.
   - Time and location to be determined later.

   More Information on Exams:

   Exams will be held in-person and written on-paper (i.e., you will not be using a computer).

   The midterm will be held in the same classroom used for the lectures, during the scheduled lecture time. Location and time for the final exam will be announced later.

   Exams will focus on material discussed in the lectures and seen in labs/assignments. Only language accepted for coding in the exams is App Inventor code blocks. More details on exam content will be shared prior to each exam.

   The exams in this course are all closed book, as such you are NOT permitted to access any of the course materials, including your notes, during the exam. You are also NOT to communicate with anyone about the exam during the scheduled write time – you are to work independently. Communication with other students during the exam (written, text, verbal, etc.) is not permitted and will constitute Academic Misconduct.

Test / Exam Requirements

- Photo ID is required for the exams.

- The use of computers, calculators, phones, or other electronic devices is NOT permitted during exams.
- Midterm and final exams are closed-book.

Students should contact the instructor as soon as possible if extenuating circumstances require missing a lab, assignment, test or examination. A medical certificate from a practicing physician may be required before any adjustments are considered.

Students with documented disabilities, temporary or chronic medical conditions, requiring academic accommodations for tests/exams (e.g., private space) or during lectures/laboratories (e.g., note-takers) are encouraged to contact Accessibility Services (AS) at 204-786-9771 or accessibilityservices@uwinnipeg.ca to discuss appropriate options. All information about a student's disability or medical condition remains confidential.
https://www.uwinnipeg.ca/accessibility-services

Students may choose not to attend classes or write examinations on holy days of their religion, but they must notify their instructors at least two weeks in advance. Instructors will then provide opportunity for students to make up work examinations without penalty. A list of religious holidays can be found in the 2024-25 Undergraduate Academic Calendar online at http://uwinnipeg.ca/academics/calendar/docs/important-notes.pdf

Final Letter Grade Assignment

Historically, numerical percentages have been converted to letter grades using the following scale. However, instructors can deviate from these values based on pedagogical nuances of a particular class, and final grades are subject to approval by the Department Review Committee.

A+	90 – 100%	B+	75 – 79%	C	60 – 64%
A	85 – 89 %	B	70 – 74%	D	50 – 59%
A-	80 – 84%	C+	65 – 69%	F	below 50%

Required Text Book / Reading List

App Inventor 2: Create your own Android Apps
Second Edition
David Wolber, Hal Abelson, Ellen Spertus, Liz Looney ISBN 13: 978-1491906842.
Available for free online: http://www.appinventor.org/book2

- There may be additional reading materials that will be provided in class.
- Class notes and notices will be posted on the course website. Students are responsible for material covered in class and announcements made in class.

Prerequisite Information

- None.

Requisite Information

- ACS-1805L (lab) must be taken concurrently.
- Students are expected to be capable of performing basic computer operations (understand and manipulate file folders, copy/paste files/contents, etc.) and using the Internet (especially using a web browser).

Regulations, Policies, and Academic Integrity

Students are encouraged to familiarize themselves with the Academic Regulations and Policies found in the University Academic Calendar at:
https://uwinnipeg.ca/academics/calendar/docs/regulationsandpolicies.pdf
Particular attention should be given to subsections 8 (Student Discipline), 9 (Senate Appeals) and 10 (Grade Appeals).

Avoiding Academic Misconduct: Academic dishonesty is a very serious offense and will be dealt in accordance with the University's policies.

Detailed information can be found at the following:

- Academic Misconduct Policy and Procedures:
  https://www.uwinnipeg.ca/policies/docs/policies/academic-misconduct-policy.pdf and
  https://www.uwinnipeg.ca/policies/docs/procedures/academic-misconduct-procedures.pdf
- About Academic Integrity and Misconduct, Resources and FAQs:
  https://library.uwinnipeg.ca/use-the-library/help-with-research/academic-integrity.html

Uploading essays and other assignments to essay vendor or trader sites (filesharing sites that are known providers of essays for use by others who submit them to instructors as their own work) involves "aiding and abetting" plagiarism. Students who do this can be charged with Academic Misconduct.

Academic Integrity and AI Text-generating Tools: Students must follow principles of academic integrity (e.g., honesty, respect, fairness, and responsibility) in their use of material obtained through AI text-generating tools (e.g., ChatGPT, Bing, Notion AI). *Use of AI Tools is prohibited (i.e., NOT permitted) in this course: students may face an allegation of academic misconduct if using them to do assignments.*

Non-academic misconduct: Students are expected to conduct themselves in a respectful manner on campus and in the learning environment irrespective of platform being used.

Behaviour, communication, or acts that are inconsistent with a number of UW policies could be considered "non-academic" misconduct. More detailed information can be found here:

- Respectful Working and Learning Environment Policy https://www.uwinnipeg.ca/respect/respect-policy.html,
- Acceptable Use of Information Technology Policy
- https://www.uwinnipeg.ca/policies/docs/policies/acceptable-use-of-information-technology-policy.pdf
- Non-Academic Misconduct Policy and Procedures: https://www.uwinnipeg.ca/policies/docs/policies/student-non-academic-misconduct-policy.pdf and https://www.uwinnipeg.ca/policies/docs/procedures/student-non-academic-misconduct-procedures.pdf

Copyright and Intellectual Property: Course materials are the property of the instructor who developed them. Examples of such materials are course outlines, assignment descriptions, lecture notes, test questions, and presentation slides—irrespective of format. Students who upload these materials to filesharing sites, or in any other way share these materials with others outside the class without prior permission of the instructor/presenter, are in violation of copyright law and University policy. Students must also seek prior permission of the instructor/presenter before, for example, photographing, recording, or taking screenshots of slides, presentations, lectures, and notes on the board. Students found to be in violation of an instructor's intellectual property rights could face serious consequences pursuant to the Academic Misconduct or Non-Academic Misconduct Policy; such consequences could possibly involve legal sanction under the Copyright Policy:
https://copyright.uwinnipeg.ca/basics/copyright-policy.html

Privacy

Students have rights in relation of the collecting of personal data the University of Winnipeg

- Student Privacy: https://www.uwinnipeg.ca/privacy/admissions-privacy-notice.html
- Zoom Privacy: https://www.uwinnipeg.ca/privacy/zoom-privacy-notice.html

Class Cancellation, Correspondence with Students and Withdrawing from Course

When it is necessary to cancel a class due to exceptional circumstances, the course instructor will make every effort to inform students via UWinnipeg email and Nexus.

Students are reminded that they have a responsibility to regularly check their UWinnipeg e-mail addresses to ensure timely receipt of correspondence from the University and/or the course instructor**.**

Please let the course instructor know if you plan on withdrawing from the course. Note that withdrawing before the VW date does not necessarily result in a fee refund.

Student Wellness

The University of Winnipeg affirms the importance of student mental health and our commitment to providing accessible, culturally appropriate, and effective services for students. Students who are seeking mental health supports are encouraged to reach out to the Wellness Centre at studentwellness@uwinnipeg.ca or https://www.uwinnipeg.ca/student-wellness/contact-us.html. For community-based mental health resources and supports, students are encouraged to dial 2-1-1. This program of United Way is available 24/7 in 150 languages.

Topics Covered (Tentative)

Chapters 1 through 13 are tutorials for programming. Chapters 14 through 24 cover more general topics including app architecture and programming concepts.

Note that all topics listed may not be covered and chapters will be offered in a slightly different order than they appear in the textbook.

- Chapter 1 Hello Purr
- Chapter 2 Paint Pot
- Chapter 3 Mole Mash
- Chapter 4 No Texting While Driving
- Chapter 5 Ladybug Chase
- Chapter 6 Paris Map Tour
- Chapter 8 Presidents Quiz
- Chapter 9 Xylophone
- Chapter 10 MakeQuiz and TakeQuiz
- Chapter 11 Broadcast Hub
- Chapter 12 Robot Remote
- Chapter 13 Amazon at the Bookstore
- Chapter 14 Understanding an App's Architecture
- Chapter 15 Engineering and Debugging an App
- Chapter 16 Programming your app's memory
- Chapter 17 Creating animated apps
- Chapter 18 Programming Your App to Make Decisions: Conditional Blocks
- Chapter 19 Programming Lists of Data
- Chapter 20 Repeating Blocks
- Chapter 21 Defining Procedures and Reusing Blocks
- Chapter 22 Working with Database
- Chapter 23 Reading and Responding to Sensors
- Chapter 24 Communicating with the Web

A permitted or necessary change in the mode of delivery may require adjustments to important aspects of course outlines, like class schedule and the number, nature, and weighting of assignments and/or exams.