THE UNIVERSITY OF WINNIPEG

APPLIED COMPUTER SCIENCE

Course Number: ACS-1805-001, L-070
Course Name: Introduction to Programming
Course Webpage: https://nexus.uwinnipeg.ca/d2l/home/70790

Instructor Information

Instructor: Amanpreet Kaur
E-mail: am.kaur@uwinnipeg.ca

Office Hours:	Mondays	1:30 pm – 2:30 pm	3C08B
Class meeting time:	Mondays/Wednesdays	2:45 pm – 4:45 pm	3D03 Lecture
Lab time:	L-070 Wednesdays	1:00 pm – 2:30 pm	3D03 Lab

Important Dates

1. First Class:		Monday, May 5, 2025
2. First Lab:		L-070: Wednesday, May 07, 2025
3. Reading Break (no class and lab):		Wednesday, June 4, 2025
4. Midterm Exam:		Monday, June 09, 2025
5. Final Withdrawal Date w/o academic penalty*:		Wednesday, June 18, 2025
6. Last Class:		Wednesday, July 2, 2025
7. Last Lab:		L-070: Wednesday, July 2, 2025
8. Final Exam:		*TBD*
9. Final Exam Period:		July 7-8, 2025
10. University closures (no class):	Victoria Day	Monday, May 19, 2025
	Canada Day	Tuesday, July 1, 2025
11. Make-up for class that fall on closure:		Monday, June 2, 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 block-based language for defining behavior. 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/

Field Code Changed

Evaluation Criteria

1. Labs (7%)
   - Based on the 7 out of 8 labs, worth 1% each
   - Labs are to be completed during the Wednesday lab period and are required to be submitted to Nexus no later than 11:59 pm on the same day.
   - No late lab submissions will be accepted

2. Assignments (18%)
   - There will be 3 assignments. Each assignment will be worth 6%, making the total to be 18% of the overall course final grade.
   - Due at 11:59 pm on the assignment indicated due date.
   - No late or handwritten assignment will be accepted. Only under special circumstances e.g., medical, death in a family, etc., and subject to approval before late assignment will be accepted with a 20% penalty off for each late day.
   - 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.
   - When submitting your assignment files, please name the file with assignment number, your first name, and student ID e.g., Assignment1_ John _12345. So, for PDF file it should be Assignment1_John_12345.pdf or a Zip file it should be Assignment1_John_12345.zip.
   - 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.
   - Problem solving assignments can be very time consuming. So please start early. Students are responsible for maintaining backups of their work. Students are responsible to review

their assignments before submission to make sure the correct files are submitted. All assignments are to be completed individually.
- Multiple submissions are permitted but will only be accepting the last submission as official final and be marked. Students may submit a partially completed assignment and will receive credit for those attempted problems. Students are responsible for backing up and protecting their assignment work.
- Assignments will be accepted up to 1 day late with a 20% penalty

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

3. Midterm Test (25%)
   - During the regular class time (see Important Dates)

4. Final Exam (50%)
   - Cumulative

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. The 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 on this course are all closed book, so 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 final exam.
- 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 Textbook / 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: The use of AI tools in this course **is prohibited.** This includes all forms of generative AI, like ChatGPT, Claude, Gemini, etc., as well as AI writing and paraphrasing tools, such as Grammarly, Quillbot, etc. If you are unsure if the use of a specific technology is permitted, ask the instructor prior to using the tool for coursework. Suspected misuse of AI may result in a report to the Senate Academic Standards and Misconduct Committee.

Non-academic misconduct: Students are expected to conduct themselves in a respectful manner on campus and in the learning environment, irrespective of the 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://www.uwinnipeg.ca/policies/docs/policies/copyright-policy.pdf

Privacy

Students have rights in relation to the collecting of personal data by 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
- Exam and Proctoring: https://www.uwinnipeg.ca/privacy/zoom-test-and-exam-proctoring.html

Class Cancellation, Correspondence with Students/Instructors 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**.**

When emailing the instructor, please use the UofW Webmail system, i.e., webmail.uwinnipeg.ca to communicate with the instructor. Do not use the Nexus email system, i.e., mail.nexus.uwinnipeg.ca, Nexus mailbox are not monitored on a regular basis.
The email sent to the instructor must include *your full name, your student #, and the COURSE # and SECTION # (like ACS-1805-001) in the subject line of your email.* A respectful manner is also expected in email communications
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.

Topics to be covered (tentative)

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

- 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

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.

A permitted or necessary change in 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.

In order to ensure a safe and comfortable learning environment for everyone, we kindly ask that all students refrain from wearing or using scented products while attending class.