Programming & Mobile Apps

Syllabus: Ma153 Section OL1 Spring 2026

Info

3 Credits

Instructor Information

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Description

This course is an introduction to programming for mobile apps. Through visual programming tools, students learn to build mobile apps and control all aspects of the application. Computer science concepts are introduced to provide a complete understanding of the programming process. No previous programming experience is required. Prerequisite(s): mathematic proficiency (see beginning of Mathematics section).

Agentic Programming

It is common now to use AI for programming and software development, so we will incorporete AI usage for helping to write AppInventor software. This will involve using various large language models to help us design and implement the software we are interested in. Since AppInventor is a visual programming language AI cannot directly produce working code for this situation but they can help you implement any program you want to build by describing to you how to set it up and how to implement it. This agentic software development is a valuable skill to have and we will develop it fully in our course.

Outcomes

1. Use a visual programming environment to create mobile apps by editing code blocks that represent the parts of an app.
2. Show the use of a development environment in the app creation process.
3. Demonstrate application architecture for mobile apps using components and event handlers.

4. Use variables in a variety of contexts.
5. Use mathematical expressions and calculations to set variables during program execution.
6. Create applications using logic and control flow constructions including if/then/else and when/do.
7. Show how random choices are made by programs during execution and demonstrate the importance of this.
8. Create applications that employ lists and iterations over lists to perform tasks.
9. Explain persistent memory and create applications that use databases for storage.
10. Demonstrate code reuse by creating procedures and understanding their function within an application.

Course Materials

We will use an online programming environment called AppInventor. The program is free and online so there is nothing to purchase.

Evaluation

Your grade will be determined as follows:

- Assignments (100%)

Assignments

You will submit programming assignments (roughly 20 assignments) as AppInventor project files (.aia project files). This is how your grade is determined. You are expected to demonstrate working programs in that format.

Late Assignments

Late Assignments submitted after the official due date and time but within 7 days of the that date and time are counted at 50% credit. Assignments more than 7 days late count for 0. You may petition to have the lateness penalty waived but do not expect that to be granted easily. You must provide official documentation of extenuating circumstances.

There is NO FINAL EXAM.

AI policy:

We will use AI at all stages of this course to help us write programs. There is no restriction with what you can do with the tools. You may use them in every poossible way, since programming is what they are good at. You will gain an ability to use them for agentic software design in this course.