Programming & Mobile Apps

Syllabus: Ma153 Section Spring 2025

Info

3 Credits
Wed 12:10p - 3p
Room: C309C

Instructor Information

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office: B831 Science and Math
office hours: M 1-3, T 11-1, W 11-12

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).

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 come from these parts: Each of these parts is described in more detail below

- Quizzes (80%)
- In Class/Homework Problems (20%)

Quizzes

Your quiz grade will come from 5 quizzes roughly covering 2 or 3 weeks material each. These quizzes are 30-45 minutes each and are usually 5 or 6 questions each. These quizzes are with no notes, no internet, no phone, no software, no AI tools. Pen and paper and calculator only. They are some multiple choice, some short answer, some true false.

Inclass/Homework Problem Credits (2 or 3 per class)

Problem credits are credits you obtain for demonstrating you have completed assigned problems. Some of these will come from homework assignments that you show me at the beginning of the class, some of these will come from in class assignments that are done during class and you show as you complete them. You will earn 1 credit for each successful problem completion.

You must be in attendance to earn problem credits.

There is NO FINAL EXAM.

Chatbot policy:

All uses of chatbots are encouraged, and there is no restriction on their use. This is especially for topics about large language models (ChatGPT, Gemini, Claude, etc).