Foundations of Mobile Design

ISTE 252.01
M | W | F 9:00–9:50

Golisano Hall
3690

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Office Hours: M/W 12:30–3:00
or by appointment

Description

This course is an introduction to designing, prototyping, and creating applications and Web apps for mobile devices. These devices include a unique set of hardware and communications capabilities, incorporate novel interfaces, are location aware, and provide persistent connectivity. Topics covered include user interaction patterns, connectivity, interface design, software design patterns, and application architectures. Programming projects are required.

Prerequisite

ISTE-240 Web & Mobile II

Learning Outcomes

Upon successful course completion, a student will be able to:

- Differentiate between the design and capabilities of mobile applications, web apps, and desktop applications
- Design an effective User Interface for a mobile device utilizing accepted mobile interface conventions
- Differentiate between the design and development of mobile apps for web, hybrid, and native (Android, and iOS).
- Create mobile applications that consume web services, and post application data to a data store.

Projects

There are three major projects for this course. There will be some class time devoted to working on these but most will require work outside of class to complete.

- Prototype—partner based project creating an interactive prototype
- Web App— individual based project that develops a dynamic web app
- Hybrid App—partner based project using Flutter

Participation

Active and engaged participation in class discussions and activities are expected. Student conduct in the classroom, GCIS open labs, and the course forums should reflect the standards of behavior expected in a professional environment. RIT strongly supports a culture of professionalism and pluralism. Be respectful of the professor, classmates, and course support personnel (i.e., teaching assistants, note-takers, interpreters, etc.). Be prepared and willing to fully participate in classroom activities when asked to do so.

All RIT students are required to review, understand and abide by the general student responsibilities on the RIT Center for Student Conduct and Conflict Resolution: http://www.rit.edu/studentaffairs/studentconduct/

Assignments

Assignments will be discussed in class and posted in myCourses. The due dates will be reflected in the calendar, but are generally due at the start of the class time.

Assignments are generally submitted by zipping up the files (use a zip file, NOT a rar, gz, or 7z file), or proving links to the appropriate dropbox in myCourses,.

In order to receive full credit for assignments, the work must be submitted on time. The myCourses timestamp will be considered the official submission time for all assignments. The maximum grade for late homework will decrease by 5% for each day it's late. I.e. a perfect project submitted one day late would receive a 95%; two days late, 90%; etc. It's much more beneficial to your learning and your grade to submit homework late rather than not at all.

Grades

15%	Project One: Prototype
15%	Project Two: Web App
20%	Project Three: Hybrid App
25%	Exercises
10%	Discussions
15%	Exams

93–100	= **A**
90–92	= **A-**
87–89	= **B+**
83–86	= **B**
80–82	= **B-**
77–79	= **C+**
73–76	= **C**
70–72	= **C-**
67–69	= **D+**
63–66	= **D**
60–62	= **D-**
0–59	= **F**

Attendance

If a student must miss a class, it is their responsibility to find out what happened during the missed class and to make up any work related to that class. There is a strong, positive correlation between students who attend class regularly and the final grade those students receive. Exceptions are made for school-related/sponsored activities; arrangements made in advance. All other absences require documentation.

Statement on Reasonable Accommodations

RIT is committed to providing reasonable accommodations to students with disabilities. If you would like to request accommodations such as special seating or testing modifications due to a disability, please contact the Disability Services Office. It is located in the Student Alumni Union, Room 1150; the Web site is www.rit.edu/dso. After you receive accommodation approval, it is very important that you communicate with the instructor so appropriate arrangements can be made.

Students with Other Concerns

Students with academic concerns beyond those related to this course may wish to contact the Academic Advisement team for the School of Information.

Students with personal concerns beyond academic issues related to the course may also wish to contact the RIT Counseling Center. http://www.rit.edu/studentaffairs/counseling/

Academic Integrity

The instructor will adhere to RIT policies on academic integrity http://www.rit.edu/~w-policy/sectionD/D8.html and the iSchool's Policy on Academic Dishonesty.

Cheating, plagiarism and collusion will not be tolerated, refer to useful guides provided at the Wallace Library Avoid Plagiarism: Cite Right site at http://infoguides.rit.edu/citationguide If you are citing any books, articles, papers, or other materials in your assignments, then you should use the ACM citation format. Details of the ACM citation format are available on the myCourses website for this course.

Students who cheat on assignments or who plagiarize material (submitting someone else's work, failing to properly cite sources, or copy/paste information from the Internet) will be reported to the iSchool and the GCCIS dean's office.

Copying programming code, website markup or resources, or other materials from other students or from online sources – even if superficial changes are made – is also considered cheating. In the case of programming code or other digital artifacts, falsifying whether your code or artifact actually operates correctly is considered a form of cheating.

Academic Dishonesty

The following statement is the Policy on Academic Dishonesty for the iSchool:

> The School of Information does not condone any form of academic dishonesty. Any act of improperly representing another person's work as one's own (or allowing someone else to represent your work as their own) is construed as an act of academic dishonesty. These acts include, but are not limited to, plagiarism in any form or use of information and materials not authorized by the instructor during an examination or for any assignment.
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> If a faculty member judges a student to be guilty of any form of academic dishonesty, the student will receive a FAILING GRADE FOR THE COURSE. Academic dishonesty involving the abuse of RIT computing facilities may result in the pursuit of more severe action.
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> If the student believes the action by the instructor to be incorrect or the penalty too severe, the faculty member will arrange to meet jointly with the student and with the faculty member's immediate supervisor. If the matter cannot be resolved at this level, an appeal may be made to the GCCIS Academic Conduct Committee.
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> If the faculty member or the faculty member's immediate supervisor feels that the alleged misconduct warrants more severe action than failure in the course, the case may be referred to the GCCIS Academic Conduct Committee. The Academic Conduct Committee can recommend further action to the dean of the student's college including academic suspension or dismissal from the Institute.

The following definitions will be used to clarify and explain unacceptable conduct. This is not intended to be an exhaustive list of specific actions but a reasonable description to guide one's actions.

> CHEATING includes knowingly using, buying, stealing, transporting or soliciting in whole or part the contents of an administered/unadministered test, test key, homework solution, paper, project, software project or computer program, or any other assignment. It also includes using, accessing, altering, or gaining entry to information held in a computer account or disk owned by another.
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> COLLUSION means the unauthorized collaboration with another person in preparing written work or computer work (including electronic media) offered for credit. Final work submitted by a student must be substantially the work of that student. Collaboration on an assignment is expressly forbidden unless it is explicitly designated as a group project. When there is any doubt, a student should consult the instructor (NOT ANOTHER STUDENT) as to whether some action is considered collusion.

Whenever there is any question as to whether a particular action is considered academic dishonesty, the instructor should be consulted.

Generative AI

Generative-AI is opening up new possibilities to explore, but understanding the foundational technologies and principles is still an important and crucial step towards acquiring domain knowledge. As we are all at the start of understanding what the capabilities of generative-AI is, this course encourages its experimentation with full disclosure, transparency, and documentation of its use. Any assignments that prohibit its use will state so in the assignment description.

The use of generative-AI without this transparency and documentation will be considered academic dishonesty and fall under academic integrity guidelines for the School of Information.

Important Dates

August 28 (Monday)	Day, evening, and online classes begin.
September 5 (Tuesday)	Last day of Add/Drop period
September 6 (Wednesday)	First day to drop from classes with a grade of "W"
September 5 (Monday)	Labor Day — No Classes
October 9–10	Fall Break (no classes)
November 10 (Friday)	Last day to drop from classes with a grade of "W"
November 22–24	Thanksgiving — No Classes
December 11 (Monday)	Last day of classes
December 13–20	Final Exams

Course Schedule

Week	Topics	Assignments
1:	Mobile vs. Desktop Patterns	Web, Hybrid, Native Discussion Diary Study Exercise
2:	Interactive Flow	Project One: Coffee Task Flow
3:	Visual Design	Figma Lab Project One: Coffee Wireframes
4:	UX/UI	Project One: Coffee Prototype

Week	Topics	Assignments
5:	Mobile Web	Project One: Feedback Discussion Media Queries Exercises
6:	Responsiveness	Responsive Images Exercise
7:	Web Apps	Midterm Exam JSON Exercise
8:	Mobile Data	Data Driven Exercise
9:	Storage/API	Project Two: Web App Final
10:	Hybrid Apps	Flutter Lab 1
11:	Flutter: Widgets	Flutter Lab 2 Project Three: Proposal
12:	Flutter : Interaction + State	Project Three: Prototype
13:	Flutter: Data + Packages	Flutter Lab 3
14:	Flutter: Animation + Themes	Project Three: Alpha
15:	Final	Project. Three: Final
Final Exam Week		Project Three: Critique

Any or all of the previous information is subject to change or adjustment during the semester.