

Mobile Device Development

CS 175

Fall 2026 Section 02 In Person 3 Unit(s) 08/19/2026 to 12/07/2026 Modified 08/26/2026

Course Information

Class time	T/Th 13:30 - 14:45
Classroom*	Science Building 253
Instructor	Yan Chen (yan.chen01@sjsu.edu)
Office Hour	MW 14:00 - 15:00 on Zoom (https://sjsu.zoom.us/j/82436528015 (https://sjsu.zoom.us/j/82436528015)) Or in person in DH282 Or Make an Appointment (https://scheduler.zoom.us/yan-chen-rurbn3/fa26)
Grader	TBD

*We will have a "flipped" class: lectures will be pre-recorded and posted on Canvas. The in-person class sessions will include code demos, in-class activities, and hints for assignments, which will NOT be recorded (except for the first 2 classes).

Course Description and Requisites

Mobile Platform APIs including those for networking, touch, graphics, data, location, and camera. Testing and profiling on devices and emulators/simulators.

Prerequisite(s): CS 47, and knowledge of Java equivalent to that of CS 46A or CS 49J; Allowed Majors: Computer Science or Forensic Science: Digital Evidence.

Grading: Letter Graded

Classroom Protocols

Students are expected to adhere to the Student Conduct Code found at the [SJSU Student Conduct website \(http://www.sjsu.edu/studentconduct/\)](http://www.sjsu.edu/studentconduct/). Additionally, students should regularly attend lectures and treat instructors and peers with respect.

- Do NOT share any course material publicly (on Canvas, GitHub, etc.) without permission, including but not limited to lecture notes, lecture videos, passwords, homework/exam solutions, and class links.
- No late homework questions (within 24 hours before due, excluding follow-ups) via email.
- **Instances of academic dishonesty will not be tolerated.** Your own commitment to learning, as evidenced by your enrollment at San José State University and the [University's Academic Integrity Policy \(https://www.sjsu.edu/studentconduct/docs/Academic%20Integrity%20Policy%20F15-7.pdf\)](https://www.sjsu.edu/studentconduct/docs/Academic%20Integrity%20Policy%20F15-7.pdf), requires you to be honest in all your academic coursework. Cheating or plagiarism (presenting the work of another as your own, the use of another person's ideas without giving proper credit, or using AI) will result in **a reduction in final course grade** (you will get a warning if it's your first time except for the last assignment and group project; 1 letter grade off every time after) and administrative sanctions by the University.

Program Information

Diversity Statement - At SJSU, it is important to create a safe learning environment where we can explore, learn, and grow together. We strive to build a diverse, equitable, inclusive culture that values, encourages, and supports students from all backgrounds and experiences.

Course Learning Outcomes (CLOs)

- Become familiar with view management and UI layout. The student should understand good principles for UI design in embedded applications and apply those principles to real-world examples.
- Develop mobile applications for android. The student will write applications using the development tools and environment provided by the manufacturer, developing a fundamental understanding of the platform. The student will become familiar with the use of debugging tools and emulators in the development process.
- Gain exposure to peripheral-based development. Modern mobile operating systems allow access to a number of embedded peripherals, such as the accelerometer and GPS. The student will get experience interfacing with these devices by understanding and using manufacturer-supplied APIs.

Course Materials

There is no required textbook for this course. The most comprehensive and up-to-date information (documentation, guide, examples, etc.) can be found on <http://developer.android.com/> (<http://developer.android.com/>). All other materials (lecture notes, homework, etc.) will be posted on [Canvas \(https://sjsu.instructure.com/courses/1592021\)](https://sjsu.instructure.com/courses/1592021). You are responsible for **regularly checking the Canvas course page** for any updates, including its messaging system.

Software/Equipment

- Laptop/Desktop with internet connection that is capable of checking Canvas course page, submitting homework, and installing/running the required software, etc.
- [Android Studio \(https://developer.android.com/studio\)](https://developer.android.com/studio) is the official IDE for developing apps on Android devices. It includes emulators for you to run and test your apps. The latest version also includes a copy of the latest OpenJDK that is officially recommended for Android projects.
- [Git \(https://git-scm.com/downloads\)](https://git-scm.com/downloads) is a version control system for you to submit your projects. We will use [GitHub \(https://github.com/\)](https://github.com/) as the remote repository for collecting submissions and sharing the solutions. Please register a GitHub account using your school email (@sjsu.edu).
- [Microsoft Office \(https://portal.office.com/\)](https://portal.office.com/) is free for students.
- (Optional) An Android phone may be helpful for a better mobile application development experience.

Further Readings (optional)

- Android Programming: The Big Nerd Ranch Guide 4th Edition, Bill Phillips, Brian Hardy
<https://www.bignerdranch.com/books/android-programming-the-big-nerd-ranch-guide-4th/>
(<https://www.bignerdranch.com/books/android-programming-the-big-nerd-ranch-guide-4th/>)
- The Busy Coder's Guide to Android Development (Mark Murphy) <https://commonsware.com/Android>
(<https://commonsware.com/Android>)

Course Requirements and Assignments

There will be in-class exercises, 4 mini-projects, and a final group project.

In-class Exercises

Multiple in-class activities will be conducted and completed during class. Instructions and submission format will be provided in class only. All submissions are due within 30 minutes after the end of class, and **late submissions will NOT be accepted**.

Mini Projects

There will be 4 mini-projects on Android apps throughout the course. Schedule your time well to protect yourself against unexpected problems. Start early so you have time to ask questions if you need help.

Late Penalty: 20% per day (no submissions accepted after 4 days).

These projects are individual projects. **Presenting code that is similar to another source (other students, Internet, or AI) without citation is considered cheating.** The only exception is the code given in class or exercises (i.e. you can use code given in class without citation).

Final Group Project

There will be a group project (up to 4 people per group) to build an Android App of your choice related to the course. **Presentations will be held during the final exam period** (Tuesday, December 15, 1:00 - 3:00 PM).

Absolutely NO late submission for the final project.

The final project is mandatory as [University_policy_S17-1](#) states:

"Faculty members are required to have a culminating activity for their courses, which can include a final examination, a final research paper or project, a final creative work or performance, a final portfolio of work, or other appropriate assignment."

✓ Grading Information

Criteria

Note that the "weight" is not percentage - they are "points". There will be at least 105 points available, including extra credits from optional exercises/activities.

Type	Weight	Topic	Notes
In-class Exercises	10	Various Activities	25 activities in total (0.4 pts each)
Mini Projects	35	Mini Apps	Project 1 (6) + Project 2 (9) + Project 3 (8) + Project 4 (12)
Final Project	55	Complete App	Documentation (15) + Quality (20) + Popularity (20)
Extra Credits	5+	Various Activities	Optional activities such as discussion.

Breakdown

The range also refers to "points", not percentages.

- A+ will be given to the top 1% of students.
- Grades near the borderlines will be rounded up depending on your level and quality of class participation.
- The grade might be curved ONLY if the final grades of the class at the end of the semester are not normal.

Grade	Points	Grade	Points	Grade	Points
A	Above 93.00	B minus	80.00 to 82.99	D plus	66.00 to 69.99

A minus	90.00 to 92.99	C plus	76.00 to 79.99	D	63.00 to 65.99
B plus	86.00 to 89.99	C	73.00 to 75.99	D minus	60.00 to 62.99
B	83.00 to 85.99	C minus	70.00 to 72.99	F	Below 59.99

University Policies

Per [University Policy S16-9 \(PDF\)](http://www.sjsu.edu/senate/docs/S16-9.pdf) (<http://www.sjsu.edu/senate/docs/S16-9.pdf>), relevant university policy concerning all courses, such as student responsibilities, academic integrity, accommodations, dropping and adding, consent for recording of class, etc. and available student services (e.g. learning assistance, counseling, and other resources) are listed on the [Syllabus Information](https://www.sjsu.edu/curriculum/courses/syllabus-info.php) (<https://www.sjsu.edu/curriculum/courses/syllabus-info.php>) web page. Make sure to visit this page to review and be aware of these university policies and resources.

Course Schedule

Important dates

Visit <https://www.sjsu.edu/registrar/calendar/fall-2026.php> (<https://www.sjsu.edu/registrar/calendar/fall-2026.php>) for the Academic Calendar.

Date	Description
Aug. 28, Friday	Waitlist ends
Sep. 15, Tuesday	Last day to drop without a W grade
	Last day to add classes via MySJSU
Nov. 1, Sunday	Daylight saving time ends (2 AM -> 1 AM)
Nov. 16, Monday	Last day to late drop/withdraw
Dec. 7, Monday	All class activities are due except for the final (for this class)
Dec. 15, Tuesday	Presentation (for this class) 13:00 - 15:00 Pacific Time

Date	Description
Dec. 19, Saturday	Grades (should be) viewable on MySJSU

Lecture Schedule

The course is divided into modules, each corresponding to a distinct Mini-app. The schedule below is tentative and subject to change with fair notice.

Module #	Date	App Name	Topics
1	Aug. 20 - Sep. 14	Mortgage Calculator	Setup Environment Android Overview Basic UI Resources Testing & Debugging
2	Sep. 15 - Sep. 22	AccGame	Sensors Customize View
3	Sep. 24 - Oct. 12	My Directory	Fragments & Dialogs List-based Views Action Bar & Menus Navigation Intents
4	Oct. 13 - Nov. 9	My Map	Device File System Shared Preferences SQLite Content Providers Device Location Google Maps SDK Background Tasks Google Places SDK
5	Nov. 10 - Nov. 19	My Service	Services Broadcast Receivers Localization Publish App
6	Dec. 1 - Dec. 15	Final Project	Peer Review 1 Presentation Peer Review 2

A detailed schedule will be posted on Canvas.

