



CSCI 526 - Mobile Games

Units: 4

Summer 2021— Tues, Thurs 6:00 pm - 9:00 PM

Location: Zoom room on Blackboard

Instructor: Scott Easley

Office: Online

Office Hours: By Request

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Course Producer: Aditya Kakad

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Course Grader: Devansh Hiren Shah

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Course Description

Students in this course will work in small teams to build games on mobile devices. The initial half of the course will focus on learning mobile game development tools and how those can be utilized with game development. During the course, students will collaborate with each other through the use of programming, art, design, and production skills. The second half is game polish and expansion.

Working in a professional studio-like atmosphere, students in CSCI 526 will learn the fundamentals of team dynamic as it relates to game design and development, and develop a playable prototype for a social, free-to-play mobile game. In teams, students will take on the roles of Designers, Engineers, Producers, etc to learn both the basics of the roles as well as how they work together in a professional development studio setting. By taking CSCI 526 students learn how to create game pitches, build a design document and present it live in front of an audience. The course culminates with a polished, portfolio-quality vertical slice and professional quality supporting documentation.

Our game veteran instructor will provide key lectures and materials, giving students a chance to learn directly from game studio techniques and make networking connections.

Learning Objectives

Students learn fundamentals of core loops and design in social games; basic technologies for mobile platforms, including working with various, commonly-used APIs; how to perform market research and analysis; how to

present a polished pitch; how to create effective design and engineering documentation; how to work on a team with defined roles to collaborate on a project

Course Notes

This course will assign a letter grade.

Students will submit work via Google Drive, Blackboard, and by showing builds to instructors and peers in class.

Students will have access to an educational version of Sensor Tower. Students will work with other development and production tools, as discussed in class.

Required Readings and Supplementary Materials

Handouts, templates, games, and sample documents will be supplied by the instructors when assigned.

Description and Assessment of Assignments

Students will create both interactive experiences and documentation. The interactive experiences will be either simple prototypes of core game mechanics or a more polished vertical slice. Assignments will be graded on effort, collaboration, execution as compared to goal, and overall quality.

Documentation may consist of: pitch presentations, design documents, technical specifications, playtesting logs, design journals, and other forms of documentation as assigned. Students will learn professional documentation and presentation techniques. Assignments will be graded on effort, collaboration, execution, and, where applicable, iterative improvement.

Grading Breakdown

Assignment	% of Grade	Due
Prototype deliverables	20	Week 6
Midterm deliverables	20	Week 10
Final Deliverables	20	Week 15
Final Presentation	25	Ongoing
Participation	5	Ongoing
TOTAL	100	

Assignment Submission Policy

Written assignments and prototypes are due at the beginning of class of the assigned week.

Missing an Assignment Deadline, Incompletes:

The only acceptable excuses for missing an assignment deadline or taking an incomplete in the course are personal illness or a family emergency. Students must inform the instructor **before the assignment due date** and present verifiable evidence for a deadline extension to be granted. Students who wish to take incompletes must also present documentation of the problem to the instructor or student assistant before final grades are due.

For assignments turned in after the assignment deadline without prior permission from the instructor, a penalty will be imposed equal to 10% of the total available points for the assignment, for each day or part of a day that the assignment is late, up to a maximum of seven days.

Attendance Policy:

Punctual attendance at all classes is mandatory.

Excused absences are:

- Illness (with a doctor's verification)
- Family or personal emergency (with verification)

Diversity

In making games and interactive media in a professional and ethical way, it is important that you consider diversity. When looking at your projects, you should consider who is depicted and how this work will impact others. What kinds of individuals and communities are represented in your work? What point of view does your work express? This class may assist you in learning how to make work that includes diverse viewpoints, and may discuss racial, religious, gender and sexual orientation issues in the context of games and interactive media.

Creating an Inclusive Space

In this class, we make a commitment to foster a welcoming and supportive environment where students of all identities and backgrounds can flourish. This means that you will be expected to offer content warnings when appropriate, use students' stated pronouns, and respect self-identifications. While debate and discussion are welcome, please remain aware of the implications of your words and the images that you include in your work. If the instructor or another student points out something problematic, avoid being defensive; this is a valuable opportunity for us to grow and learn together. If you have a concern about any aspect of the class, you are welcome to speak with the instructor or the advisor for the division.

Additional Policies

This course emphasizes teamwork, and one of the desired learning outcomes is for students to develop communication and leadership skills. Students are expected to treat each other with respect, listen to each other, and work together towards a shared, collaborative, healthy work culture. Any student found to be disruptive or engaging in behavior that doesn't meet the standards of respectful teamwork may be asked to leave by the instructor.

If you experience any problems with a fellow student regarding their work, please bring up your concerns with the instructor.

PLEASE NOTE:

FOOD AND DRINKS (OTHER THAN WATER) ARE NOT PERMITTED IN ANY INSTRUCTIONAL SPACES IN THE CINEMATIC ARTS COMPLEX

Course Schedule: A Weekly Breakdown

****Subject to change****

	Topics/Daily Activities	Readings and Homework	Deliverable/ Due Dates
Week 1 Session 1 May 20	<ul style="list-style-type: none"> ● Lecture <u>What to Expect in Class</u> ● Introduction and Course Basics ● Mobile game development primer ● Teams self-selected based on project interest 	Research: play games in different genres, pay attention to core loops, game features, possible monetization strategies. Think about a game genre you're interested in exploring. What makes them effective? What's the emotional investment?	Homework: Join Discord server Form Teams, Pick 2-3 games and play them daily for a week. Join or make a team
Week 2 Session 1 May 25	<ul style="list-style-type: none"> ● Lecture <u>Design Lecture 1 – Game Structure Basics</u> ● Design Document Overview (Premise, Pitch, Story, Gameplay Breakdown, Critical Functions of play, Level walkthrough, ● Team captains assigned, review each team project 	Divide teams into design and coding implementation.	Due: Name team, choose Captain, fill in roster on schedule page. Team chooses game idea, make one-paragraph GDD post link on main page.
Week 2 Session 2 May 27	Lecture <u>Tech Lecture 1 – Project Planning</u>	Team document genres and primary features of chosen games, start coding tests, add game drawing to GDD explaining core mechanic.	Due: In GDD cite genres and primary features of chosen games as inspiration. Plan project.
Week 3 Session 1 June 1	Lecture: <u>Design Lecture 2 – Game Loop vs. Core Game Loop</u>	Start coding to complete greybox prototype by end of Week 4, do tests of publishing to WebGL	Due: All teams using version control.
Week 3 Session 2 June 3	Lecture: <u>Tech Lecture 2 – Tools and Resources</u>	Make sure teams have chosen SVN, engines and	Due: Greybox Prototype is ready in following week
Week 4 Session 1 June 8	Lecture: <u>Design Lecture 3 – Prototyping Basics</u>	Make list of things to add to game by midterm, and by final. Add to GDD	Prove greybox works and is base of mechanics for game
Week 4 Session 2 June 10	Lecture: <u>Tech Lecture 3 - Game Development Basics</u>	Professor will review each team's prototype in their breakout room. <ul style="list-style-type: none"> - Live to and professor 	Due: Greybox Prototype published on WebGL , link on team page.

Week 5 Session 1 June 15	Lecture: <u>Analytics 1 – Sinks and Faucets</u>	Work with the team to determine the specific sinks and faucets in game. If there is a store, implement basic store.	Due: Finite list of sinks and faucets in game
Week 5 Session 2 June 17	Lecture: <u>Tech Lecture 4 – Mobile Development</u>	Work on midterm, choose items you would want to track player doing <ul style="list-style-type: none"> - Sinks Faucets for future - Accommodate it with analytics 	Optimize workflow of team for turnaround and verification of game
Week 6 Session 1 June 22	Lecture: <u>Analytics 2 – Intro to Analytics</u>	Dashboard coding into game, connect and communicate – verify and validate tracking works (24 hour turnaround)	Working dashboard is in game.
Week 6 Session 2 June 24	Lecture: <u>Analytics 3 – Data Collection</u> Supplemental: <u>Unity Analytics Resources</u>	Make sure your analytics are working by tracking team’s playing. Choose emcee for midterm Write points to bring up in midterm <ul style="list-style-type: none"> - Gameplay - Dashboard 	Team proves game works, prove dashboard works
Week 7 Session 1 June 29	Lecture: <u>Case Study Spurpunk Development</u>	Update GDD to reflect midterm presentation, practice presentation <ul style="list-style-type: none"> - Show gameplay to prof - Show dashboard to TA 	Each team needs: <ul style="list-style-type: none"> - Playable WebGL link - Feedback link - Movie link
Week 7 Session 2 July 1	MIDTERM PRESENTATION	MIDTERM PROTOTYPE 526 students present (in teams) their analytics dashboards, showing the data they have collected. They will do this in breakout rooms, each prototype team with the corresponding PM team.	Due: Live midterm presentation and playable link on WebGL. Playtesting Feedback on each Team’s game. Live breakout room sessions with your PMs.
Week 8 Session 1 July 6	Lecture: <u>Game Design 4 Risk and Reward</u>	Review feedback and analytics data, determine with team what each means and how best to improve game with time left	Due: Teams meet and discuss CTIN 482 feedback and changes to game for final.
Week 8 Session 2 July 8	Lecture: <u>Tech Lecture 5 - Unity UI</u>	Students will present feedback to professor as to whether they made changes or not, and if so and if not, why not. Factors of time, greater improvements, etc.	Due: Final conversations with team on evolution of game with analytics – suggestions for future

Week 9 Session 1 July 13	Lecture: <u>Design Lecture 5 – Mobile Game Controls</u>	Tighten up your controls and the flow of the player’s experience in game. Publish latest to Web GL, send it to family and friends for last round of tracked improvements.	Due: Scheduled plan for changes/fixes/updates for final presentation
Week 9 Session 2 July 15	Lecture: <u>Tech Lecture 6 - Level Design to XML</u>	Choose the top 3 or 4 most surprising or difficult analytics to discern their meaning and determine the fix to include in final presentation.	Prepare analytics feedback from dashboard as part of final presentation.
Week 10 Session 1 July 20	Design Lecture: <u>Design Lecture 6 - Prototyping Physics</u> Supplemental Lecture: <u>Getting a Job in Game Industry</u>	Sort out the midterm’s presentation for what will be showcased, the progression of thought, the inclusion of feedback and what the team determined from it, the analytics and meaning, and the results.	Prepare for Final presentation, sort the various links on team schedule page.
Week 10 Session 2 July 22	Final Project Presentations	Students will show the game live <ul style="list-style-type: none"> - One or more team emcees - Recap the game idea - Show it at midterm - Show chosen analytics data - Show team decisions on it - Showcase current game - Improvements - 3-5 minutes max. - Playable link - Up to date GDD 	DUE: Final Presentation Final Publication Final Documentation

Statement on Academic Conduct and Support Systems

Academic Conduct

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Part B, Section 11, “Behavior Violating University Standards”

<https://policy.usc.edu/student/scampus/part-b>. Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, <http://policy.usc.edu/scientific-misconduct>.

Discrimination, sexual assault, intimate partner violence, stalking, and harassment are prohibited by the university. You are encouraged to report all incidents to the *Office of Equity and Diversity/Title IX Office* <http://equity.usc.edu> and/or to the *Department of Public Safety* <http://dps.usc.edu>. This is important for the health and safety of the whole USC community. Faculty and staff must report any information regarding an incident to the Title IX Coordinator who will provide outreach and information to the affected party. The sexual assault resource center webpage <http://sarc.usc.edu> fully describes reporting

options. Relationship and Sexual Violence Services <https://engemannshc.usc.edu/rsvp> provides 24/7 confidential support.

Support Systems

A number of USC's schools provide support for students who need help with scholarly writing. Check with your advisor or program staff to find out more. Students whose primary language is not English should check with the *American Language Institute* <http://ali.usc.edu>, which sponsors courses and workshops specifically for international graduate students. *The Office of Disability Services and Programs* <http://dsp.usc.edu> provides certification for students with disabilities and helps arrange the relevant accommodations. If an officially declared emergency makes travel to campus infeasible, *USC Emergency Information* <http://emergency.usc.edu> will provide safety and other updates, including ways in which instruction will be continued by means of Blackboard, teleconferencing, and other technology.

Disruptive Student Behavior:

Behavior that persistently or grossly interferes with classroom activities is considered disruptive behavior and may be subject to disciplinary action. Such behavior inhibits other students' ability to learn and an instructor's ability to teach. A student responsible for disruptive behavior may be required to leave class pending discussion and resolution of the problem and may be reported to the Office of Student Judicial Affairs for disciplinary action.

Syllabus Updates:

This syllabus is liable to change up to the beginning of class and possibly over the semester. Please check the posted syllabus regularly, and note all changes that are shared by the instructor in class.