

CSCI 526 Mobile Games Development (4 units)

Spring 2019

Course Information

Course: Mobile Game Development, CSCI 526, 4 units

Place and Time: EGG 108, Monday 2:00 p.m. – 5:30 p.m.

Class web page: <http://gamepipe.usc.edu/mobilegames/>

Instructor: Scott Easley

Office location: Office 207 Gamepipe Labs

<http://tinyurl.com/q8n4emg>

Email: seasley@usc.edu

Office hours: Tuesday 2:00 p.m. – 5:00 p.m.

Thursday 2:00 p.m. – 5:00 p.m.

Course TA: Kyle Morgenroth

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Course Objective

The objective of this course is to develop games on mobile devices like Apple iPhone, using various technologies like Unity3D, Cocos2D, etc. Emphasis is placed on building entertainment and serious games as well as novel applications of mobile embedded technology.

After successfully completing this course, students should be able to:

- Know the features of mobile games, the workflow of mobile game development and how mobile gaming technologies work;
- Create mobile game apps on mobile devices such as Apple iPhone, using proper technologies;
- Communicate and work effectively with teammates including artists, designers, and programmers.

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.

Recommended Preparation: Basic mobile game apps development technologies (Unity3D, Cocos2D), teamwork tools (Google shared docs, Skype, SVN), languages (C#, Objective C, C++, Javascript)

Textbook: Course Notes and technical documentation.

Evaluation of student performance

Weekly	Deliverables	50
Mid-term	Deliverables	15
Final	Deliverables	25
Final	Presentation	10
	Total:	100

Mid-term and Final Project/Presentation evaluation will be based on how a project will realize the goals the team has set out for itself and the project. Ultimately, this course exists to empower students to bring their vision onto the screen. The more you put into the project, the closer it will be to what was envisioned. For the Weekly Deliverables, the results of the online color-coded schedule sheet will be a key input. The professors will evaluate both the amount of tasks fully completed on time and also the complexity of the tasks.

More specifically:

- a) Weekly deliverables will be graded based on online color-coded schedule sheet: green=1(fully completed task), yellow = 0.5 (partial completed task), red = 0 (not completed task).
- b) Midterm/Final Deliverables will be graded based on how well midterm/final milestone specifications are achieved. And it could be affected by following factors.
 - Green-colored task difficulty and completion quality
 - Code quality
 - Perceived effort
- c) Overall, your final letter grade will be determined by total points for all your deliverables and final presentation. Strictly: 90%+ = A, 80%+=B, 70%+=C, 60%+=D, and lesser numbers are an F.

Course Outline

Week 1 (Jan 7th)

- Introduction and Course Overview
- Mobile game development process
- Resources and expectations in class
- Pitch game ideas – Join or make teams
- Researching selected mobile games
 - Lecture: CS 526 What to Expect - Class 1

Week 2 (Jan 14th)

- Game Design Basics (Premise, Pitch, Story, Gameplay Breakdown, Critical Functions of play, Level walkthrough)
- Project Planning (Game Engine Selection, Collaboration Tools)
- Game Lecture:
 - CS 526 Game Design Basics - Class 2

NOTE: Jan 21st is a U.S. Holiday (Martin Luther King Jr's birthday)

Week 3 (Jan 28th)

- Online class schedule
- Discussion of prototyping for fast iteration
- Game Lecture:
 - CS 526 Prototyping Basics - Class 3

Week 4 (Feb 4th)

- Project planning / Design finalization
- Prototyping Basics
- Tools introduction (Source Control, Task Management)
- Tools Lecture:
 - SVN and other resources available for teams

Week 5 (Feb 11th)

- Greyboxing Basics
- Getting started with development tools
- Quick walk through Unity3D, Cocos2D
- Game Lecture:
 - CS 526 Prototyping Basics #2 - Class 5

NOTE: Feb 18th is a U.S. Holiday (President's Day)

Week 7 (Feb 25th)

- Development tools for mobile
- Game Lecture:
 - CS 526 Review Prototype - Class 6

Week 8 (Mar 4th)

- Review Prototype
- Game Loop vs Core Loop
- Studio Sessions (In studio sessions, student game development teams will develop and implement their game designs.)
- Game Lecture:
 - CS 526 Game Loop vs. Core Game Loop - Class 7

NOTE: The week of Mar 11th is Spring Break

Week 9 (Mar 18th)

- Game demos preparation for Mid-term presentation
- Game Lecture:
 - CS 526 Mobile Game Controls - Class 8

Week 10 (Mar 25th)

- Mid-term demo of developed games - all students in all teams must be present for the in-class demonstration
- Playtesting of all teams games with notetaking

Week 11 (Apr 1st)

- Review current state of game and assimilate playtest feedback
- Schedule changes/additions to game for final
- Game Lecture:
 - CS 526 Risk and Reward - Class 10

Week 12 (Apr 8th)

- Triage from playtesting, project work for the latter half of the semester – reasonable scope
- Game Lecture:
 - CS 526 Faking Physics in Unity - Class 11

Week 13 (Apr 15th)

- FTUE (First time User Experience)
- Studio Sessions (In studio sessions, student game development teams will develop and implement their game designs.)

Week 14 (Apr 22nd)

- FTUE (First time User Experience)
- Review of game mechanics
- Review of overall gameplay
- Schedule and practice presentation for next week
- Load up final movie to youtube for presentation

Week 15 (Apr 29nd)

- Final In-Class Game demo
- Live presentation of Game and playtesting notes
- One-on-one feedback for student games and questions

Statement for Students with Disabilities

Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me (or to TA) as early in the semester as possible. DSP is located in STU 301 and is open 8:30 a.m.–5:00 p.m., Monday through Friday. The phone number for DSP is (213) 740-0776.

Statement on Academic Integrity

USC seeks to maintain an optimal learning environment. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to protect one's own academic work from misuse by others as well as to avoid using another's work as one's own. All students are expected to understand and abide by these principles.

Scampus, the Student Guidebook, contains the Student Conduct Code in Section 11.00, while the recommended sanctions are located in Appendix A: <http://www.usc.edu/dept/publications/SCAMPUS/gov/>. Students will be referred to the Office of Student Judicial Affairs and Community Standards for further review, should there be any suspicion of academic dishonesty. The Review process can be found at: [http://www.usc.edu/student-affairs/SJACS/..](http://www.usc.edu/student-affairs/SJACS/)