Advanced Game Projects

USC School of Cinematic Arts, CTIN 491
USC Viterbi School of Engineering, CSCI 491a
USC Viterbi School of Engineering, CSCI 529a

Professors:

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Meeting Information:
Lecture/Lab (all students attend):
    Thursdays 3:30-6:50 pm
    Where: RTH 321

Course Description:
CTIN 491 and CSCI 491a and CSCI 529a is the first semester of the two-semester advanced game project class administered collaboratively by the USC School of Cinematic Arts and the USC Viterbi School of Engineering.

Students bring their individual talents as designers, programmers, artists, writers, composers, producers, etc. together in cross-disciplinary teams. Mentors from industry and the faculty are integrated into the process from the start. Teams that need 3D art assets have access to additional student resources from the CSCI 281 Pipelines for Games class.

The deliverables created during the Fall semester are the foundation for materials to be polished in the Spring semester (e.g. 491b/529b).

Eight projects have been chosen by a rigorous selection process to be produce in this class. For 2012 - 2013, these eight projects are:

1. Core Overload - Emory Irpan (lead)
2. House of Cards - Sam Rosenthal (lead)
3. Scrapyard - Chris Oslund (lead)
4. Outer Wilds – Alex Beachum (lead)
5. Thralled - Miguel Oliveira (lead)
6. Conclave - Andrew Thompson (lead)
7. Homeward – Will Hellwarth (lead)
8. Wild Skies - Nathan Burba (lead)

The main course goal is to develop a playable level demonstration of the core design and the approved scoped features for the game. This game should be installable, intuitive and functional so that a player can pick up and play.

Deliverables are:
-Game Design Document (at the mid-term class)
-Final Playable Game level exe
-Zipped project on server
-Installer (if applicable)
-Project Properly Organized on Server Directory
-Game Poster (must have screenshots of gameplay)
-10 Screenshots: Focusing on different stages or features
-Gameplay Video – edited
-Marketing website
-Demo at USC GamePipe Demo Day

Stretch goals are:
-Marketing trailer
-In-game cinematics/story telling elements
-Product box

Profs Malamed, Easley, and Zyda will each be available for all eight projects.

During class, each individual on the team must be prepared to discuss his/her work from the previous week. The team leader and producer on the team will give each student (including themselves) a new individualized assignment for the coming week. All assignments will be posted in writing on the project Google Spreadsheet found on the course website. Assignments will come from the team leader with assistance/approval from the professors. The order of the team visits with the professor will be determined randomly each week. Teams must be prepared to present at the beginning of each class. The producer on the team owns the document and is required to have updated the document prior to class by canvasing the team for status updates. Students should use this class time to ensure they agree with the assignments, as performance on the goals is a key component of the final grade (see evaluation section below).

After visits by the instructors the teams will have group work sessions and the professors will be available to circulate and advise each project on specific issues.

Class attendance is mandatory. This time is invaluable for teams to meet together and work on their projects production. Failure to attend the entire class will impact the class grade (see attendance policy below). We cannot stress enough the importance of being in class and part of your team for the entire class session.

Completed student work from the 491ab/592ab course will be promoted via coordinated effort by the University. The big picture goal of this class is simple: USC strives to create the best student games in the world.

Course content (summarized by class meeting)
Week 1 (8/25): Introduction/Overview
    Presentation/Discussion: Overview of the course format and assignments.
    Presentations from each of the four team leaders
    Prelim team assignments – e.g. individual rosters completed
    Team work sessions
    Team Assignment 1 - Industry Mentors: teams will be responsible for recruiting volunteer mentors from industry. Each team must recruit at least one technical mentor who is a hands-on coder. Teams may recruit other mentors at their discretion.

Week 2 (9/1): Achieving First Playable, Part 1
    Presentation/Discussion: Efficient game productions are built by iterating on early playable prototypes. Teams will work in the early weeks of the course to achieve a first playable in whatever form best suits their project. Playtests for each game will be scheduled regularly – starting in Week 3.

    Team work sessions

    Online Reading:
    Robin Hunicke, Marc LeBlanc, Robert Zubek – MDA: A Formal Approach to Game Design and Game Research - http://www.cs.northwestern.edu/~hunicke/MDA.pdf
    Team work sessions

Week 3 (9/8): Achieving First Playable, Part 2
    Presentation/Discussion: Prototyping and playtesting are core competencies of game developers.

    Team work session
    Online Reading:
    Postmortem: Schizoid -
    http://www.gamasutra.com/view/feature/3796/postmortem_torpex_games_schizoid.php

Week 4 (9/15): The Power of a Diverse Group
    Presentation/Discussion: Groups that include diverse talents can achieve power far greater than that of any individual.

Team work session

Online Reading:
Malcolm Gladwell – In the Air – Who Says Big Ideas Are Rare?
http://www.newyorker.com/reporting/2008/05/12/080512fa_fact_gladwell

Week 5 (9/22): Why You Should Submit Your Game to Festivals
Discussion of leading venues for submitting student projects. Examples include: Independent Games Festival, Indiecade, Penny Arcade Expo and other venues.

Team Work session

Online Reading:
http://en.wikipedia.org/wiki/Independent_Games_Festival
http://latimesblogs.latimes.com/technology/2009/08/indiecade-festival-los-angeles.html

Week 6 (9/29): Narrative Architecture
Presentation/Discussion: Does your game tell a story? There are many ways to think about story in games.
Team Work session
Online Reading:
Henry Jenkins – Game Design as Narrative Architecture -
http://web.mit.edu/cms/People/henry3/games&narrative.html

Week 7 (10/6): Team Building
Discussion of the week's topic and online reading.
Team Work session
Online Reading: Postmortem: Bioshock -
http://www.gamasutra.com/view/feature/3774/postmortem_2k_boston2k_.php

Week 8 (10/13): A Higher Standard
Presentation/Discussion: Pushing boundaries with game design.
Team work session
Online Reading:
"A Higher Standard" — Game Designer Jonathan Blow Challenges Super Mario's Gold Coins, "Unethical" MMO Design And Everything Else You May Hold Dear About Video Games -
http://multiplayerblog.mtv.com/2007/08/08/a-higher-standard-game-designer-jonathan-blow-challenges-super-marios-gold-coins-unethical-mmo-design-and-everything-else-you-may-hold-dear-about-video-games/#more-134

Week 9 (10/20): Mid-term Deliverable and Class Evaluation
Class discussion on how to make the class more efficient.
Mid-term Deliverable Due
        -Final Game Design Document
        -Playable Game level exe
        -Game Poster, v1

-10 Screenshots: Focusing on different stages or features, v1

Optional
-Gameplay Video – edited, v1
-Marketing website, v1

Mid-term Class Evaluation
Team work session
Online Reading:
http://www.latimes.com/features/home/lat-10-things-you-dont-have-to-do-anymore-20110610,0,990965.htmlstory

Week 10 (10/27): Usability and Measuring Fun
Presentation/Discussion: How do you know if your game is accessible? Fun? The answer is: user testing.
Team work session
Online Reading:
Ben Cousins - Measurement Techniques for Game Design -
http://www.gamasutra.com/features/20050512/cousins_01.shtml

Week 11 (11/3): Test Test Test
Presentation/Discussion: Putting the player at the center of the design process: Playcentric design.
Team Work session
Online Reading:
Postmortem: American McGee's Grimm -
http://www.gamasutra.com/view/feature/3910/postmortem_american_mcgees_grimm.php

Week 12 (11/10): Leveling and Game Design Psychology
Presentation/Discussion: Building levels from your core mechanic
Team Work Session
Online Reading:
Postmortem: MadStone -
http://www.gamasutra.com/view/feature/3903/postmortem_riverman_medias_.php

Week 13 (11/17): Managing Chaos
Discussion of the week's topic and online reading..
Team work session
Online Reading:
Postmortem: Uncharted Drake's Fortune -
http://www.gamasutra.com/view/feature/3809/postmortem_naughty_dogs_.php

Week 14 (11/24): Thanksgiving Holiday – NO CLASS MEETING
The instructors will be available for individual meetings during the first part of the week.

Week 15 (12/1): Student Project Presentations - Rehearsal for Demo Day

Due: Final Deliverables Due
-Final Playable Game level exe
-Zipped project on server
-Installer
-Project Properly Organized on Server Directory
-Game Poster (must have screenshots of gameplay)
-10 Screenshots: Focusing on different stages or features
-Gameplay Video – edited
-Marketing website

Team work session
Wrap-up and course evaluation

Demo Day
All students are required to present their work at the Gamepipe Demo Day event. The date for Demo Day is Wednesday, December 7, 2012.

Class Motto:
Make it happen.

Quality of Work / Scope of Work Expectations
-Final Playable Game level exe – we expect a playable game level that shows off the features of the game. The level must be working software – e.g. not a mockup. The level should include art assets appropriate for your project - such as sound, music, animation, a HUD. The focus should be on gameplay and not just game mechanics.

-Zipped project on server – we expect your game to be delivered in a zip file and posted on the Gamepipe server.

-Installer – your expect your game to come with an installer

-Project Properly Organized on Server Directory – we expect proper organization of your project using an online repository

-Game Poster (must have screenshots of gameplay) – we expect each team to produce a marketing-style game poster that tells the story and promotes the game. You are encouraged to hang them in Gamepipe.

-10 Screenshots: Focusing on different stages or features – the 10 screenshots should show off the key features of the game. These shots can be used for your website or personal portfolio.

-Gameplay Video – edited – we expect you to make a polished video showing off the game. The video will be used for marketing your game to festivals and for USC's prestigious First Look program. The videos should be a minimum of 2 minutes long and a maximum of 5 minutes long. Here is a breakdown

of various ways to capture gameplay video: http://www.pixelprospector.com/2010/08/how-to-record-and-edit-gameplay-videos/

-Marketing website – we expect each team to create a marketing website for your game that incorporates all of the materials described above. The site can be used to market your game and yourselves.
Evaluation of student performance:

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

Mid-term and Final Project/Presentation evaluation will be based on how will a project realizes 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 Google spreadsheet mentioned above 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.

(1) CTIN 491a/CSCI 491a-529a Advanced Games has been graded for the last several years the same way: As a team of students working together to finish a custom video game project. This teaches self-reliance and gives students a much-needed exposure to working within a team. The student leader (or leaders) are the ones doling out specific weekly assignments to their team-mates, who in turn are responsible to ensure the fairness of their given assignment. This endeavors to simulate a real-world working environment of problem-solving and teamwork.

Our class grading rubric is:
a) Online color-coded schedule sheet: green=1, yellow = .5, red = 0.
The total is divided by the number of weeks. Strictly: 90%+ = A, 80+=B, 70+=C, 60+=D, and lesser numbers are an F.

b) Then the grade is affected by the following non-quantifiable criteria, in order of importance:
-- green-colored task difficulty and completion quality
-- final product quality per milestone descriptions
-- code quality
-- perceived effort

(2) This system was planned as a series of checks and balances: The Team Leader decides the direction and assignments (in tandem with the Producer if there is one) to each team member. However each team member is also personally responsible to scrutinize their assignments as fair, as well as if the current color-grading of the online schedule is reflective of their work. It is emphasized throughout class that individual team members will have explicitly agreed to their

weekly assignments before the end of each class -- whether agreeing outright, or working with the Lead/Producer to have them modified during class. This online scheduling sheet was devised so no one feels surprised by his or her grade -- anyone can view its progress throughout the semester.

Team Leaders can receive a bump in their grade as is commensurate to the added pressure of leading a team; this does not divorce them of the responsibility of doing their job well for a good grade.

(3) Because of the custom setup for each project, it is impossible to dictate a structure that applies to each so sternly that we have a mathematical category for attitude, help, efficacy of code, importance within the project, foresight, insight, honesty, friendliness and many other amorphous qualities that are crucial to working within a team but divorced from coding. This same issue works within any team-project oriented classes, such as *CSCI 526 Advanced Mobile Devices and Game Consoles* class, *CSCI 486 Serious Game Projects* class, and *CTIN 491 Cinema Game Projects* class.

The most important feature of this class is that it empowers the students. This class is where final-year students are exposed to working on teams with each other, and saddled with needing both technical skill as well as the emotional maturity to work within that group and accept responsibility for their actions -- as is much more the case within the post-graduate workplace we are preparing students for.

Attendance Policy:
Attendance in class is mandatory. We will take roll each week. Two unexcused absences lowers your grade one full point. Three unexcused absences lowers your grade two full points. Four unexcused absences – request to withdraw from the course (instructor's discretion).
Excused absences are for: Illness (with doctor's verification), Family emergency, personal emergency (unavoidable car breakdown, etc.)

Incompletes:
The only acceptable excuses for taking an incomplete in the course are personal illness or a family emergency. Students must inform the professor before the final project is due and present verifiable evidence in order for a make-up to be scheduled. Students who wish to take incompletes must also present documentation of the problem to the instructor or teaching assistant before final grades are due.

Resources:
Art Assistance
The Gamepiple Pipelines class will build assets for the 491 teams provided the teams are in need of 3D assets and follow some basic requirements. Here is an ideal schedule for integrating with the Pipelines class (note that this schedule may be adjusted slightly to fit the needs of the teams)

AG (Advanced Games) | PL (PipeLines)

First Semester:

Project game designs | Maya skills
Learn OAC   Learn OAC   WEEK 1-7
Approved Core Idea/Game Doc
Approved Engine
Approved Level Design

Core Idea Implemented | Building Level
Engine Running   Building Props   WEEK 8 - 15
(At least) One fully playable level

Second Semester:

Proposed Future Levels | Main Characters Modeled
Interactive Stats Sheet   Expanded Levels Placeholder   WEEK 1 - 7
Feature Lock

Expanded Mechanics Playable | Expanded Levels fully built
Expanded Levels Playable   Main Characters Textured   WEEK 8 - 15

Team Meeting Room and Work Space
Each team has a private workspace in the School of Cinematic Arts, Building B, Room 102 (SCB 102) –
900 W. 34th Street. You may meet in this room outside of class and store project materials here at your
leisure.

Usability Lab
Each team has access to the School of Cinematic Arts Usability Lab. It is a facility with a one way
mirror for testing users and is located in the Robert Zemeckis Center for Digital Arts, second floor –
3131 S. Figueroa Street. You must reserve the room ahead of time through Chris Swain.

Sound Library
Each team has access to the School of Cinematic Arts Sound Library for sound effects and other audio
needs. The software is available in the Robert Zemeckis Center for Digital Arts, first floor – 3131 S.
Figueroa Street. You must reserve it ahead of time through Chris Swain.

Note 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 us as early in the semester as possible. DSP is located in STU 301, and is open 8:30am5:00pm Monday through Friday. The phone number for DSP is (213) 740-0776.

Academic Integrity:
The School of Cinematic Arts and the Viterbi School of Engineering expect the highest standards of academic excellence and ethical performance from USC students. It is particularly important that you are aware of and avoid plagiarism, cheating on exams, submitting a paper to more than one instructor, or submitting a paper authored by anyone other than yourself. Violations of this policy will result in a failing grade band be reported to the Office of Student Judicial Affairs. If you have any doubts or questions about these policies, consult SCAMPUS and/or confer with the instructor.