Intermediate Game Design & Development

USC School of Cinematic Arts, CTIN 484/CTIN 489

Instructors:		**Student Assistant:**
Peter Brinson	Richard Lemarchand	Joel Gratton
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Course Description: This follow up to the classes CTIN 488 Game Design Workshop and CTIN 483 Introduction to Game Development introduces students to more advanced concepts in game design and development such as concept ideation, digital prototyping, interface design, usability testing, communication, collaborative teamwork, project scoping and management. The main emphasis of the class is on the conceptualization of innovative design goals and the execution of those goals in the form of a complete, polished intermediate game project.

This is a team-based studio class and a large part of the class content will focus on critique and problem-solving for individual team projects. The class will include discussions on design and development topics; however, many class days will be devoted to working on and critiquing team projects. As such, it is imperative that students treat the development of their projects professionally and bring requested milestones to class on time, ready to present. Students will be expected to participate actively in all critique sessions, giving and receiving feedback of the highest quality.

Students are responsible for forming their own teams within the first three weeks of class. Those who do not find their own partners will be assigned one by the instructors. Students may not work alone. You are encouraged to look outside of existing friendships to find teammates whose skills counterbalance your own: i.e. programmers should seek out artists and vice versa.

Throughout this class, you are encouraged to take risks and to look beyond the examples of existing videogame genres to try new and different design ideas. At the same time, you are also expected to fully complete an innovative small game, and so must take into account the timeline of the course and the resources available to you to complete the project.

You are encouraged to enlist the help of outside musicians, sound designers and/or voice-over actors. In addition, you may work with outside artists to add animation and visual style to your project. However, you and your teammate must do all of the game design and programming for your projects. Also, you must fairly credit all contributors to your project.

Meeting Information:
SCI L113
M/W 1-3PM
Units: 2/2
Prerequisites: CTIN 488 or CTIN 541, CTIN 483

Grading and Due Dates:

Class Participation - 10%
Teamwork - 15%

Wed, Week 2 - Pinball Prototype - 5%
Mon, Week 4 - Audience experience goals
Mon, Week 5 - Present a final game idea
Wed, Week 6 - Game Macros and Burndown Chart reviewed by instructors - 5%
Mon, Week 8 - Test Plan Feedback - 5%
Mon, Week 11 - Metrics gathering assignment - 5%
Mon, Week 11 - Alpha deadline - 15%
Mon, Week 13 - Beta deadline - 15%
Wed, Week 14 - Video rough cut due - 5%
Mon, Week 15 - Gold Master deadline: video due - 5%. final game due - 15%

Course content (summarized by class meeting)

Wk	**Monday**	**Wednesday**
1	August 24 Course Overview, Expectations & Schedule Self Introduction Presentations Lecture: Why Are We Here? Week 2 assignment given	August 26 Communication Skills Lecture Unity Lesson Perforce
2	August 31 Brinson Lecture Unity Lesson	September 2 Present Pinball Prototypes Perforce
3	September 7 HOLIDAY	September 9 PRE-PRODUCTION BEGINS Form Teams Lecture: Beauty and Risk

		Team Building Exercise
4	September 14 PRE-PRODUCTION UNDERWAY Lecture: Lecture: Pre-production, Full Production, Alpha, Beta and Gold Master Update instructors on progress and team roles. Audience Experience Goal Statement due today	September 16 Unity Tip of the Day Update instructors on progress and team roles.
5	September 21 Formally present and discuss prototypes and concept ideation as teams. Lecture: The Game Macro.	September 23 Formally present and discuss prototypes and concept ideation as teams. Lecture: The Burndown Chart.
6	September 28 Present Game Macros to Richard Discuss Technical Design with Peter	September 30 Digital Prototype Due Lecture: Seven types of testing Guest Lecture: Berklee professor, Michael Sweet (1pm)
7	October 5 FULL PRODUCTION BEGINS Review Vertical Slices. Sell Sheets Due Present Burn Down Chart to instructors Lecture: Concentric Development	October 7 Unity Pro Tips and Tricks Review Vertical Slices. Lecture: Formal Playtesting in an Informal Environment

8	October 12 Playtest questionnaires and exit interview questions due today	October 14 Playtest 1 in Class
9	October 19 Lecture: the QA process Workshop Playtest 1 questionnaire results due today	October 21 Lecture: the Alpha milestone In class peer playtest.
10	October 26 Update instructors on progress and team roles. Lecture: Game Metrics	October 28 Update instructors on progress and team roles. Lecture: Juiciness
11	November 2 ALPHA BUILD DEADLINE Lecture: TRCs Review Alpha Builds. Metrics-gathering assignment due today.	November 4 Review Alpha Builds.
12	November 9 Playtest 2 in class	November 11 In class peer playtest. Trailers lecture.
13	November 16 BETA DEADLINE & TECH CERT Review Beta Builds. Playtest questionnaire results and metrics data due today	November 18 Review Beta Builds.
14	November 23	November 25

	Post-production workshop: final game balance, audio mix and frame rate check. Trailer rough cut presented to class.	Thanksgiving
15	November 30 GOLD MASTER DEADLINE Trailer, game, and all deliverables due.	December 2 Project “Postpartum” and class wrap-up

More on the Assignments

Pinball Machine Prototype: Due Week 2, students work alone on a 3D pinball machine game. The primary goal is for students to learn or hone their Unity3D skills in preparation for the remainder of the semester. Students are encouraged to choose a theme, not unlike the one we would find on a real pinball machine. Projects should demonstrate a working game but the camera does not need to dolly back - that is, students do not have to render a 3D pinball machine, but can fix a camera on the playable area only.

Forming Teams: As noted above, students must find their own production partners Week 3, or they will be assigned a partner by the instructors. Based on the ideation concepts presented in Weeks 1 and 2, students should seek out team members with ideas that are interesting to them. They should also bear in mind the need to balance programming and visual design skills on each team. In Week 3, these teams will be formalized and concepts for the digital prototyping assignment for each team will be approved.

Game Macro and Burn Down Chart: An important aspect of this class is the opportunity to scope and manage a project from start to finish. This class uses the “Game Macro” approach suggested by Mark Cerny and Michael John’s “Method” to provide a plan that is concrete enough to permit the creation of a schedule (in the form of an Agile Development-style "burn down chart"), but abstract enough to be modifiable as game design discoveries are made during development. The Game Macro and Burn Down Chart will be updated as the project progresses, to adapt to any opportunistic changes made to the game design, and to the team’s evolving understanding of how long it takes to implement features and create assets.

Playtesting Assignments: Students will conduct two sets of formal playtests over the course of the semester – although you are encouraged to playtest informally as well. Prior to each test, teams will prepare a questionnaire and an exit interview. The playtests will be conducted during class and a follow-up report is due the next week.

Reviews & Critiques: In addition to formal testing, projects will also undergo extensive peer review and critique during the class sessions. Students are expected to participate actively in both the giving and receiving of feedback as a crucial part of the design process. These reviews will cover both creative and technical aspects of the project.

Final Project: Students are expected to complete their game projects by the end of the semester. All interface art, characters, environments, levels, etc. must be integrated into the students’ projects in order to

fully flesh out the player experience. Concept art that that has not been integrated into the final build will not be considered as part of the project grade. As such, it is very important that the initial design process consider the scope of project envisioned and the resources available. The game project is expected to go through each of the production milestones listed on the schedule, including: pre-production, concept ideation, prototyping, approval for final project, playtesting, Alpha milestone review, Beta milestone review, usability testing, and a final "Gold Master" build. Projects that do not go through these milestones within the class sessions will not be considered for submission of the Final Project.

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 instructors before the assignment due date and present verifiable evidence in order for a deadline extension to be granted. Students who wish to take incompletes must also present documentation of the problem to the instructors 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. Students arriving more than five minutes late to three classes, more than ten minutes late to a single class, or leaving early, will be marked as having an unexcused absence from class, unless prior permission has been obtained from the instructors. The following guidelines are from the Interactive Media Division & Games handbook regarding absences and grading and apply to all students.

Guidelines for absences affecting grading:

Two unexcused absences: lowers grade one full grade point (for example, from A to B)
Three unexcused absences: lowers grade two full grade points
Four or more unexcused absences: request to withdraw from course (instructor's discretion)

Excused absences are:

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

Social media use, including text messaging, Internet messaging and email, is not permitted in class unless explicitly permitted by the instructors. A 0.5% grade reduction will result from each occurrence of a student being found using social media in class.

Content Warnings

If you include content in the work that you produce which may cause distress to your fellow students, please tell me (the instructor) before showing the work in class, and make a verbal 'content warning' immediately before you present the work in class. Also include a written content warning, either at the beginning of a piece of written work or in the readme file of a project, when you submit the work for grading.

This is not intended to limit the subject matter that you address with your work: on the contrary, this simple approach is intended to create an environment in which you are free to address any subject matter that you wish, in a spirit of respect and consideration for your classmates.

Students who ever feel the need to step outside class during the presentation or discussion of work that warrants a content warning may always do so without academic penalty. You will, however, be responsible for any material you miss. If you do leave the room for a significant time, please make arrangements to get notes from another student or see me individually.

Content which requires a content warning includes graphic depictions or descriptions of violence, sexual acts, racial, sexual or cultural stereotyping, abuse (especially sexual abuse or torture), self-harming behavior such as suicide, self-inflicted injuries or disordered eating, eating-disordered behavior or body shaming, and depictions, especially lengthy or psychologically realistic ones, of the mental state of someone suffering abuse or engaging in self-harming behavior.

If you have any questions about what warrants a content warning, including visual, auditory or tactile depictions, textual or verbal descriptions, and meaning embodied in game mechanics and interaction patterns, please let me (the class instructor) know.

If you ever wish to discuss your personal reactions to material presented in class, either with the class or with me afterwards, I welcome such discussion as an appropriate part of our coursework.

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.

Fair Use

Fair use is a legal principle that defines certain limitations on the exclusive rights of copyright holders. The Interactive Media & Games Division of USC's School of the Cinematic Arts seeks to apply a reasonable working definition of fair use that will enable students and instructors to develop multimedia projects without seeking authorization for non-commercial, educational uses. In keeping with section 107 of the Copyright Act we recognize four factors that should be considered when determining whether a use is fair: (1) the purpose and character of use, (2) the nature of the copyrighted work, (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole, and (4) the effect of the use upon the potential market for or value of the copyrighted work. In general, we regard the reproduction of copyrighted works for the purposes of analysis or critique in this class to be covered by the principle of fair use.

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 Section 11, *Behavior Violating University Standards* https://scampus.usc.edu/1100-behavior-violating-university-standards-and-appropriate-sanctions/. 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, and harassment are not tolerated by the university. You are encouraged to report any incidents to the *Office of Equity and Diversity* http://equity.usc.edu/ or to the *Department of Public Safety* http://capsnet.usc.edu/department/department-public-safety/online-forms/contact-us. This is important for the safety whole USC community. Another member of the university community – such as a friend, classmate, advisor, or faculty member – can help initiate the report, or can initiate the report on behalf of another person. *The Center for Women and Men* http://www.usc.edu/student-affairs/cwm/ provides 24/7 confidential support, and the sexual assault resource center webpage sarc@usc.edu describes reporting options and other resources.

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://dornsife.usc.edu/ali, which sponsors courses and workshops specifically for international graduate students. *The Office of Disability Services and Programs* http://sait.usc.edu/academicsupport/centerprograms/dsp/home_index.html 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.

Lemarchand Biography:
An Associate Professor in the Interactive Media & Games Division of the School of Cinematic Arts, Richard Lemarchand is a game designer, a writer, a public speaker and a consultant.

Between 2004 and 2012, Richard was a Lead Game Designer at Naughty Dog in Santa Monica, California. He led the design of all three PlayStation 3 games in the *Uncharted* series including *Uncharted 3: Drake's Deception*, and *Uncharted 2: Among Thieves*, winner of ten AIAS Interactive Achievement Awards, five Game Developers Choice Awards, four BAFTAs and over 200 Game of the Year awards.

Richard also worked on *Uncharted: Drake's Fortune*, *Jak 3* and *Jak X: Combat Racing* for Naughty Dog, and helped to create the successful game series *Gex*, *Pandemonium* and *Soul Reaver* at Crystal Dynamics in the San Francisco Bay Area. He got his game industry start at MicroProse in the UK, where he co-founded the company's console game division. Richard has made storytelling action games the focus of

his career, and he is interested in the way that narrative, aesthetics and gameplay work together to hold a player's attention and facilitate the expression of their agency.

A passionate advocate of indie and experimental games, Richard has been involved with the IndieCade International Festival of Independent Games for several years, and was the co-chair of the IndieCade Conference in 2010 and 2012. He regularly speaks in public on the subjects of game design, development, production, philosophy and culture, and organizes the annual GDC Microtalks, a session which celebrates games and play with short talks by diverse speakers. He is also a faculty member of the GDC Experimental Gameplay Sessions.

Richard grew up in a small town in rural England, dreaming of ancient civilizations and outer space. He has a degree in Physics and Philosophy from Oxford University.

Brinson Biography:
Peter Brinson is an artist and educator living in Los Angeles. His practice and teaching enjoy an unreconciled incongruity; on one hand, he embraces art as playful imprecision, an age-old mode for commentary and contemplation, and often the inexplicable. And on the other, he chooses the computer, the contemporary embodiment of concrete efficiency and industrial productivity.

Brinson teaches computer programming as a creative practice, and he makes games and films that explore the aesthetics of problem-solving, feature documentary play, and celebrate collective ownership. He has exhibited in numerous venues, including the Museum of Modern Art, Independent Games Festival, Ars Electronica, Slamdance, Indiecade, Yerba Buena Center for the Arts, Games for Change, A Maze Game Festival, The Kitchen, and SIGGRAPH. He has works distributed by the Video Data Bank and Steam, and acquired by the Los Angeles County Museum of Art.

Brinson attended the University of North Carolina and the California Institute of the Arts and is an Assistant Professor of Practice at University of Southern California's Interactive Media and Games Division in the School of Cinematic Arts.