

# Intermediate Game Design & Development

**USC School of Cinematic Arts, CTIN 484/CTIN 489**

**Instructors:**

**Student Assistants:**

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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 10am to 11:50 am

**Units:** 2/2

**Prerequisites:** CTIN 488

**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 - Alpha deadline - 15%

Mon, Week 13 - Beta deadline - 15%

Mon, Week 14 - Metrics gathering assignment - 5%

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)**

<b>Wk</b>	<b>Monday</b>	<b>Wednesday</b>
1	January 9 Course Overview, Expectations & Schedule Self Introduction Presentations Lecture: Why Are We Here? Week 2 assignment given	January 11 Unity Lesson Preproduction Exercise
2	January 16 HOLIDAY	January 18 Present Pinball Projects
3	January 23 PRE-PRODUCTION BEGINS Lecture: Prototyping (Complete reading given during Week 2) Form Teams	January 25 Team Building Exercise Perforce

4	<p>January 30</p> <p>PRE-PRODUCTION UNDERWAY</p> <p>Lecture: Pre-production, Full Production, Alpha, Beta and Gold Master</p> <p>Update instructors on progress and team roles.</p> <p>Audience Experience Goal Statement due today.</p> <p>Divergent Prototypes due today.</p>	<p>February 1</p> <p>Unity Tip of the Day</p> <p>Update instructors on progress and team roles.</p> <p>Mini-Lecture: Preproduction Planning</p>
5	<p>February 6</p> <p>Formally present and discuss prototypes and concept ideation as teams.</p> <p>Lecture: The Game Macro.</p>	<p>February 8</p> <p>Formally present and discuss prototypes and concept ideation as teams.</p> <p>Lecture: The Burndown Chart.</p>
6	<p>February 13</p> <p>Digital Prototype Due</p> <p>Guest Lecture: Berklee professor, Michael Sweet (1pm)</p>	<p>February 15</p> <p>Discuss Technical Design with Peter</p> <p>Present Game Macros to Jesse</p>
7	<p>February 20</p> <p>HOLIDAY</p> <p>Sell Sheets Due</p>	<p>February 22</p> <p>FULL PRODUCTION BEGINS</p> <p>Review Vertical Slices.</p>
8	<p>February 27</p> <p>Present Burn Down Chart to instructors</p> <p>Lecture: Concentric Development</p>	<p>March 1</p> <p>Lecture: Formal Playtesting in an Informal Environment</p>

	<p>Playtest questionnaires and exit interview questions due today</p>	<p>Playtest 1 in Class</p> <p>Unity Pro Tips and Tricks</p>
9	<p>March 6</p> <p>Lecture: the QA process</p> <p>Workshop</p> <p>Playtest 1 questionnaire results due today</p>	<p>March 8</p> <p>Lecture: the Alpha milestone</p> <p>In class peer playtest.</p>
	<p>SPRING BREAK</p>	
10	<p>March 20</p> <p>Update instructors on progress and team roles.</p> <p>Lecture: Game Metrics</p>	<p>March 22</p> <p>Update instructors on progress and team roles.</p> <p>Lecture: Crash Course in Sound Design and Editing</p>
11	<p>March 27</p> <p>ALPHA BUILD DEADLINE</p> <p>Lecture: TRCs</p> <p>Review Alpha Builds.</p> <p>Metrics-gathering assignment due today.</p>	<p>March 29</p> <p>Review Alpha Builds.</p>
12	<p>April 3</p> <p>In class peer playtest.</p> <p>Trailers lecture.</p>	<p>April 5</p> <p>Playtest 2 in class</p>
13	<p>April 10</p> <p>BETA DEADLINE &amp; TECH CERT</p> <p>Review Beta Builds.</p>	<p>April 12</p> <p>Review Beta Builds.</p> <p>Mini Lecture: Triage</p>

	Playtest questionnaire results and metrics data due today	
14	<p>April 17</p> <p>Post-production workshop: final game balance, audio mix and frame rate check.</p>	<p>April 19</p> <p>Trailer rough cut presented to class.</p>
15	<p>April 24</p> <p>GOLD MASTER DEADLINE</p> <p>Trailer, game, and all deliverables due.</p>	<p>April 26</p> <p>Project "Postpartum" and class wrap-up</p>

### 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 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 ½ grade (for example, from A to A-)

Three unexcused absences: lowers grade one full grade

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.

## **A Safe 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 we will use preferred 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 that something you have said or shared with the group might be offensive, 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 encouraged to speak with the instructor. If you feel uncomfortable speaking with the instructor, you are also welcome to speak with either the undergraduate or graduate advisor for the division, who can discuss the issue with you directly or point you toward other on- and off-campus resources for addressing your concern.

## **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, up to and including expulsion from the program and the university. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Part B, Section 11, *Behavior Violating University Standards* [policy.usc.edu/student/scampus/part-b](http://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, [policy.usc.edu/scientific-misconduct/](http://policy.usc.edu/scientific-misconduct/).

You are welcome to make use of code libraries, Unity extensions, and the like, as appropriate to your project. However the substance of the project must be your work, and you must document the sources (links to the original work) in a text file submitted with your project. If you are not sure whether you need to document something, document it. If you are uncertain about what constitutes plagiarism, it is your responsibility to ask the instructors for clarification.

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* [equity.usc.edu](http://equity.usc.edu) or to the *Department of Public Safety* [dps.usc.edu/contact/report](http://dps.usc.edu/contact/report). 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. *Relationship and Sexual Violence Prevention and Services* (RSVP, formerly known as the Center for Women and Men) [engemannshc.usc.edu/rsvp](http://engemannshc.usc.edu/rsvp) provides 24/7 confidential support, and the *Sexual Assault Resource Center* [sarc.usc.edu](http://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* [dornsife.usc.edu/ali](http://dornsife.usc.edu/ali), which sponsors courses and workshops specifically for international graduate students. *The Office of Disability Services and Programs* [dsp.usc.edu](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* [emergency.usc.edu](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.