

Intermediate Game Design and Production

USC Games | CTIN-489 (18363) | Spring 2023

Instructors

Professor:

Aaron Cheney

Email: acheney@usc.edu

Office: Adjunct Faculty Office (near the Fishbowl in SCI 201)

Office Hours: By appointment only

Student Assistant:

Taro Zhou

Email: clzhou@usc.edu

Office Hours: TBD

Class Information

Meeting Location: SCI L113

Meeting Times: M/F 3:00pm - 4:50pm

Units: 4

Grading

Your grade in this class will be determined by the following assignments, deliverables, and activities.

Assignment / Deliverable / Activity	Percentage of Total Grade
Ideation prototypes	10%
Preproduction deliverables	15%
Alpha milestone	15%
Formal playtests	10%
Beta milestone	15%
Release candidate milestone	15%

In-class work/participation	10%
Final paper	10%
Total	100%

Course Readings

The **required** textbook for this course is:

A Playful Production Process: For Game Designers (and Everyone)
by Richard Lemarchand, MIT Press, 2021

You may purchase your copy (physical or digital), or you can get a free copy from the USC Library by going to [this](#) link and selecting “EBSCOhost Ebooks.”

Supplementary reading listed in the syllabus will be available on the web, as handouts in class, or as digital files.

Course Description and Overview

Intermediate Game Design and Production (also known colloquially as “Intermediate”) builds upon prior game development courses to introduce you to the full game development cycle. In this class you’ll work in teams of 2 to develop a small game with roughly 5-10 minutes of gameplay. We’re looking for quality over quantity.

Along the way you’ll learn and practice key skills, including: concept ideation, digital prototyping, interface design, usability testing, communication, collaborative teamwork, project scoping and planning, version control, healthy development practices, and Unity development.

This class is structured around the 4 phases of game development: ideation, preproduction, full production, and postproduction. Within industry you’ll find each of these phases taking various amounts of time depending on the scope of a project. Within a 15-week semester each phase will necessarily be compacted to fit the time constraints of a university course. Nevertheless, you’ll gain a full exposure to the breadth of game development.

Large portions of this class are dedicated to giving and receiving feedback about projects and processes. You are expected to actively participate in constructive critiques by providing high-quality feedback to your peers.

You are encouraged to view your project this semester as the *next* game on your journey. As with every project you work on (here at the university and throughout your career), you’ll learn new skills, shed bad habits, and become a stronger game developer.

Course Content by Class Meeting

This course is organized into four phases, which mirrors the four project phases outlined in *A Playful Production Process*: **Ideation**, **Preproduction**, **Full Production**, and **Postproduction**.

Assignment Descriptions and Turning In Assignments

Detailed descriptions of each assignment (including a grading rubric, where appropriate) will be provided *at least two weeks prior* to the assignment deadline here in the syllabus. You are responsible for reading and understanding [Turning In Assignments](#) for general assignment instructions.

Ideation | Weeks 1–3

During the **ideation** phase you'll use various blue sky thinking techniques (such as brainstorming, mindmapping, and automatism) to generate ideas for your project this semester. A prototype is due each week to help you explore ideas for your game. This is the most open phase of development where you have freedom to explore creative and innovative ideas. By the end of **ideation** your team will have a set of **project goals** that will guide you through the rest of development.

Week 1	
Monday - Jan 9, 2023	Friday - Jan 13, 2023
<p><u>In Class:</u></p> <ul style="list-style-type: none"> Course overview and class expectations Self introductions (part 1) Ideation, brainstorming, and prototyping <p><u>Due:</u></p> <ul style="list-style-type: none"> Reading: <i>PPP</i>: Introduction, Chapters 1-5 Reading: Catastrophic Prototyping and Other Stories by Chaim Gingold Self Introduction Presentation 	<p><u>In Class:</u></p> <ul style="list-style-type: none"> Self introductions (part 2) Communication skills: fundamentals How to run a successful playtest Playtest session <p><u>Due:</u></p> <ul style="list-style-type: none"> Reading: <i>PPP</i>: Chapters 6, 12 Team Character Sheets Time Commitment Calculations Brainstorm Exercise Prototype 1 - Hypothesis
Week 2	
Monday - Jan 16, 2023	Friday - Jan 20, 2023
No Class - Martin Luther King Jr. Day	<u>In Class:</u>

	<ul style="list-style-type: none"> • Project goals • The Three Cs • Communication skills: feedback • Playtest session <p><u>Due:</u></p> <ul style="list-style-type: none"> • Reading: <i>PPP</i>: Chapter 7 • ☰ Ideas Spreadsheet • ☰ Prototype 2 - The Bad Version
Week 3	
Monday - Jan 23, 2023	Friday - Jan 27, 2023
<p><u>In Class:</u></p> <ul style="list-style-type: none"> • Version control and housekeeping • Method and agile • Wellness, self-care, and thriving <p><u>Due:</u></p> <ul style="list-style-type: none"> • Reading: <i>PPP</i>: Chapters 8, 9 • Watch: Method by Mark Cerny 	<p><u>In Class:</u></p> <ul style="list-style-type: none"> • Review project goals • Unity fundamentals: scenes • Playtest session <p><u>Due:</u></p> <ul style="list-style-type: none"> • ☰ Project Goals Statement • ☰ Prototype 3 - What Remains

Preproduction | Weeks 4–6

Preproduction is *the most important phase of game development*. This is where you'll take the **project goals** generated during **ideation** to narrow your focus, answer tough questions, and create several deliverables that will guide you through the rest of development.

At the end of **preproduction**, you'll have a **vertical slice** (with a **beautiful corner**) that demonstrates what kind of game you're making and what it will look like; you'll have a **game design macro** that provides a 10,000 foot view of your project from start to finish; and you'll have a **schedule** in the form of a **burndown chart** to help you track your progress through the rest of development.

Week 4	
Monday - Jan 30, 2023	Friday - Feb 3, 2023
<p><u>In Class:</u></p> <ul style="list-style-type: none"> • Shifting gears to preproduction • Concentric development 	<p><u>In Class:</u></p> <ul style="list-style-type: none"> • Unity fundamentals: coroutines • Perforce (hands-on demonstration)

<ul style="list-style-type: none"> The Vertical Slice <p><u>Due:</u></p> <ul style="list-style-type: none"> Reading: <i>PPP</i>: Chapters 10, 11, 13 	<ul style="list-style-type: none"> Project structure, housekeeping Playtest session <p><u>Due:</u></p> <ul style="list-style-type: none"> Watch: Perforce and Unity Revised Project Goals Statement
Week 5	
Monday - Feb 6, 2023	Friday - Feb 10, 2023
<p><u>In Class:</u></p> <ul style="list-style-type: none"> Game Design Macro The beautiful corner Story structures <p><u>Due:</u></p> <ul style="list-style-type: none"> Reading: <i>PPP</i>: Chapters 17, 18 	<p><u>In Class:</u></p> <ul style="list-style-type: none"> Unity fundamentals: debug functions Sustainable development: against crunch Playtest session <p><u>Due:</u></p> <ul style="list-style-type: none"> Vertical slice progress Game Design Macro draft
Week 6	
Monday - Feb 13, 2023	Friday - Feb 17, 2023
<p><u>In Class:</u></p> <ul style="list-style-type: none"> Burndown chart workshop The Vertical Slice deliverable The challenges of preproduction Juice and sound <p><u>Due:</u></p> <ul style="list-style-type: none"> Reading: <i>PPP</i>: Chapters 14, 19, 21 Berklee sell sheets Watch: Juice it or lose it 	<p><u>In Class:</u></p> <ul style="list-style-type: none"> Berklee visit Braintrusts and milestone reviews Playtest session <p><u>Due:</u></p> <ul style="list-style-type: none"> Vertical slice build Burndown chart Game design macro

Full Production | Weeks 7–12

Full production is the longest phase of development; it's where you will execute on your schedule generated during **preproduction**. You will achieve two milestones: the **alpha milestone** ("feature complete" and "sequence complete") and the **beta milestone** ("content complete"). Along the way, you'll run two formal playtests and collect **metrics** from your game to measure how successful your game is at reaching your **project goals**.

Week 7

Monday - Feb 20, 2023

No Class - President's Day

Friday - Feb 24, 2023

In Class:

- Shifting gears to full production
- Milestone reviews
- *No playtest this week*

Due:

- Reading: *PPP*: Chapter 22
- 25% to alpha

Week 8

Monday - Feb 27, 2023

In Class:

- Standup meeting
- Sustainable development: against heroes
- Alpha milestone (feature and sequence complete)

Due:

- Watch: [No More Heroes](#)
- Reading: *PPP*: Chapter 28
- Reading: [It's Not Just Standing Up](#)

Friday - Mar 3, 2023

In Class:

- Standup meeting
- Formal playtests
- Unity fundamentals: scriptable objects
- Playtest session

Due:

- Reading: *PPP*: Chapters 24, 25
- 50% to alpha

Week 9

Monday - Mar 6, 2023

In Class:

- Standup meeting
- Types of testing
- Metrics
- Stubbing content

Due:

- Reading: *PPP*: Chapter 23, 26, 29

Friday - Mar 10, 2023

In Class:

- Standup meeting
- Unity fundamentals: custom editors
- Certification
- Bug tracking
- Playtest session

Due:

- 75% to alpha
- Metrics integration
- Reading: *PPP*: Chapters 27, 34

Week 9.5

Monday - Mar 13, 2023

Friday - Mar 17, 2023

No Class - Spring Recess

Week 10

Monday - Mar 20, 2023

Friday - Mar 24, 2023

In Class:

- Beta milestone (content complete)
- Workshop session
- Meetings with instructors

Due:

- Reading: *PPP*: Chapter 31

In Class:

- Formal playtest (alpha)

Due:

- Playtest script
- Playtest survey
- Alpha build

Week 11

Monday - Mar 27, 2023

Friday - Mar 31, 2023

In Class:

- Braintrust - alpha presentations (part 1)

Due:

- Formal playtest data analysis (part 1)

In Class:

- Braintrust - alpha presentations (part 2)

Due:

- 50% to beta

Week 12

Monday - Apr 3, 2023

Friday - Apr 7, 2023

In Class:

- Workshop session

Due:

- Nothing due

In Class:

- Formal playtest (beta)

Due:

- Beta build

Post Production | Weeks 13–15

Post production is the phase of development where you tie up loose ends, fix bugs, add polish, and stabilize your game. An important part of every project is to reflect on what you learned, what you'd do differently, and plan for the future.

Week 13	
Monday - Apr 10, 2023	Friday - Apr 14, 2023
<u>In Class:</u> <ul style="list-style-type: none">Braintrust - beta presentations (part 1) <u>Due:</u> <ul style="list-style-type: none">Formal playtest data analysis (part 2)	<u>In Class:</u> <ul style="list-style-type: none">Braintrust - beta presentations (part 2) <u>Due:</u> <ul style="list-style-type: none">33% to release candidate
Week 14	
Monday - Apr 17, 2023	Friday - Apr 21, 2023
<u>In Class:</u> <ul style="list-style-type: none">Standup meetingShifting gears one last timeThe Release CandidateTrailers <u>Due:</u> <ul style="list-style-type: none">Reading: <i>PPP</i>: Chapters 32, 33	<u>In Class:</u> <ul style="list-style-type: none">Professionalism, networking, and career advice <u>Due:</u> <ul style="list-style-type: none">67% to release candidate
Week 15	
Monday - Apr 24, 2023	Friday - Apr 28, 2023
<u>In Class:</u> <ul style="list-style-type: none">Class reflection and postpartum discussionLooking toward the future <u>Due:</u> <ul style="list-style-type: none">Reading: <i>PPP</i>: Chapter 36	<u>In Class:</u> <ul style="list-style-type: none">Release candidate presentations <u>Due:</u> <ul style="list-style-type: none">Release candidate build

Additional Class Policies

Attendance Policy

Punctual attendance is mandatory; absences will result in grade reductions.

An absence is defined as follows:

- Arriving more than 5 minutes late to 3 classes.
- Arriving more than 10 minutes late to a single class.
- Leaving class early.

The impact to grades are as follows (these are taken from the Interactive Media Division & Games handbook regarding absences, and they apply to all students):

- Two absences: lowers grade one full grade (for example, from A to B).
- Three absences: lowers grade two full grade (e.g. from A to C).
- Four or more absences: request to withdraw from course (instructor's discretion).

All that said, we understand emergencies and illnesses happen. This policy may be waived for:

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

Contact your instructor as soon as possible when one of these circumstances arises (ideally before class, but within 24 hours for exigent circumstances). Being a team-based class, it's also expected that you communicate your absences with your partner.

Social Media Usage in Class

Social media use (including text messaging, Internet messaging, 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 found using social media in class.

Late Assignment Submissions and Incompletes

The only acceptable excuses for missing an assignment deadline or taking an incomplete 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 instructor 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.

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.

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, 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](#). Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on [scientific misconduct](#).

Discrimination, sexual assault, and harassment are not tolerated by the university. You are encouraged to report any incidents to the [Office for Equity, Equal Opportunity, and Title IX](#) or to the [Department of Public Safety](#). This is important for the safety of the 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) 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](#), which sponsors courses and

workshops specifically for international graduate students. The [Office of Student Accessibility Services](#) 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](#) will provide safety and other updates, including ways in which instruction will be continued by means of Blackboard, teleconferencing, and other technology.