

# Game Design and Production Capstone

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## Syllabus

### Overview

Students will be guided through a full production cycle of game development from brainstorming a cool game concept to playtesting and polishing a complete, short but awesome game. The primary purpose of this course is for students to gain experience working intensely as a team or “game studio.” Students will learn how to work successfully with people that have diverse skill sets, backgrounds, and interests. Teams will be formed by students (with instructor approval) or by the instructor. Once teams are formed they can’t be changed and will last both Winter and Spring quarters.

### Course Goals

- To experience a full game development production cycle (from concept to asset production) within a collaborative context.
- To learn how to “scope” a game design idea based on available time, resources, and expertise.
- To gain experience working in cross-functional teams.
- To gain practice in evaluating game design ideas, game prototypes, and demos in order to improve their quality.

### Main Deliverable

*The main deliverable of the two-quarter course is to design and develop an original, fun, indie game.* Capstone I (winter quarter) will deliver an alpha build of a game, defined as a demo that articulates the core gameplay, art, animation, and audio concept; Capstone II (spring quarter) a demo build, defined as 1-minute of awesome gameplay experience which includes exemplary animation, art, writing, and audio.

### Grading Criteria

#### **Social: 30% of grade**

Goodwill and Participation **in Class:** 15%

Goodwill and Participation **with Team:** 15%

#### **Productive: 50% of grade**

Midterm milestone: 20%

Alpha build: 30%

#### **Reflective: 20% of grade**

Midterm “reality check” reflection: 10%

Postmortem: 10%

**\*\*Extra Credit:** Going above and beyond helping other students: 1-10% At discretion of instructor. The student who was helped needs to email the instructor and summarize the help that was provided.

## Feedback

Feedback on your progress and performance in the course will be based on the following items:

- **Communication and Critical Thinking:** How well are you able to express your ideas, verbally, through your design, and in written form? Is critical thinking evident in your design work?
- **Design Process:** What are the strengths and weaknesses of your game design process? Are you able to evaluate the work at different points in the process and to identify areas for future development?
- **Collaboration:** Are you able to leverage the strengths of your teammates in ways that are both productive and generous??

## Promises

**Two promises to be made:**

1. To your faculty and your peers: that you will respect our time and efforts with your own; that you will work your hardest, and seek to be a better designer, programmer and artist through trial and error, offering enthusiastic criticism and accepting it in order to improve on your ideas.
2. To yourself: to push yourself beyond the bounds of your comfort zone, and to be brave, adventurous and surprising.

## Attendance

You are expected to attend all classes and participate in class activities as scheduled. If you have to miss a class for health or family reasons you are expected to follow up with the instructor and find out what was missed, and make up any work. Any absences beyond 2 will result in an automatic grade deduction of 1/2 letter grade for each additional absence. Absences beyond 4 result in automatic failure of the course.

## Late assignments

Late assignments will only be accepted within three days of the due date. Each day the assignment is late will decrease the possible point value by 10%.

## Incomplete

An Incomplete grade is given only for an exceptional reason such as a death in the family, a serious illness, etc. Any such reason must be documented. Any incomplete request must be made at least two weeks before the final and approved by the Dean of the School of Computer Science, Telecommunications and Information Systems. Any consequences resulting from a poor grade for the course will not be considered as valid reasons for such a request.

## External Expert Advisors

Each studio team is expected to work with an External Expert Advisor, defined as an expert in some aspect of game development (art, audio, design, programming, etc.) that is not on staff or faculty at CDM. The role of the advisor is to provide additional support and perspective. Studio teams are expected to get input from their advisors at key milestones during the development process, as laid out in the Milestones document. Capstone faculty will help teams to identify advisors, if needed.

## Festival Quality

The game you will be working on is expected to be of the highest caliber you can produce. As a result, you are expected to submit your game to a festival or ship it to public venue (Itch, Steam, Etc) space where it can be compared to other games bring made by students across the country. You must research and find the festival or space you want to submit to. Keep in mind that this generally requires you to build in time for the submission into your schedule.

## Team Studio Culture

Each student game studio will be able to determine its own group culture and develop a set of unique strategies that helps that culture flourish. Based on your team's group identity, you'll determine together how you'll communicate, meet, and collaborate in the ways that best serve your development process. Communication is key to fostering and maintaining a healthy team dynamic. For example, some teams will thrive making instant messaging a core component, other teams will do better using Skype, scheduling more face-to-face time, etc.

## Team Member Roles

Each student will be responsible for producing quality work in one of the 4 following job fields:

### 1. Artist

Artists will work in 2D, creating icons, buttons, model textures, and game screens as well as 3D, creating models, UV mapping, rigging, and animating. A close working relationship with the programmer will be key to creating assets that will work well in the game engine.

### 2. Designer

Designers will write and maintain game design documents, develop and program prototypes, devise and implement level design in code, and strategically structure playtests to solicit the most meaningful feedback. A close working relationship with the programmer will be key to designing a game that will work well in the game engine.

### 3. Programmer

Programmers will work with the designer to develop the game mechanics and implement the game levels, and will work with the artists to develop the GUI and HUD. Programmers, with the help of designers, will prototype game concepts in order to test their technical feasibility, playability and fun. NOTE: Messy code that that works imperfectly is infinitely better than beautiful code that takes a long time to write—holding out the empty promise of working perfectly.

### 4. Sound Designer and Music Composer

Sound designers/composers will work with the game designers to create sound effects and music that serves the narrative and theme of the game design. Downloading sound effects from the internet and remixing them into new sound effects is encouraged.

## Producer

Each team will designate a person to serve as their Producer. The producer must have a dual-role designation and be “designer and producer,” or “artist and producer,” or “programmer and producer,” or “sound designer and producer.” In addition to their other responsibilities, the producer will be responsible for project scheduling, organizing meetings, and always ensuring that the big picture is always being served (the big picture is to actually complete a game that provides an awesome 1 minute experience).

## Remixing is Okay!

Students are allowed to download any asset they wish and use them in their game: 3D models, music, images, etc. Teams do not need to ask permission to use whatever they want. The only caveat is that at the end of each quarter each student must provide a list of the assets that they created and the things they did for their studio.

## TEAM BLOG

Every team needs to establish a website and developer diary devoted to their project. Here there should be articles on your processes, art pipeline, dev pipeline, builds, galleries and trailers. You are to post weekly and keep us all abreast of your project.

## Winter Capstone: Overview of Milestones

Overview of Winter 2022 Milestones

MILESTONE 1: Reality Check Report (week 1) ()

- Teams report: how should their game design and production plans be modified?

MILESTONE 2: Present Plans for Beta Build (week 2)

- Teams briefly present first playtest build
- Teams present plan for final Beta Build and solicit feedback/criticism from class
- Define vision for outputs by various team members: What exactly will get done in terms of level design, programming, art, sound, and UI?

MILESTONE 3: Level Development Sequence (weeks 2-4)

- (Minimum 3 rounds; 1 round with outside experts)
- Level prototype sequence (digital)
- Prototype playtesting feedback reports (minimum 3)
- Another technology test/tech demo (if appropriate)
- Another reality check—what needs to get cut from game?

MILESTONE 4: Final Sprint Plan (by week 7)

- Teams present current state of game and solicit feedback/criticism from class
- List and prioritize all tasks, features, and content of the game that still need to get done

MILESTONE 5: Polished Art, UI and Audio Slice Demos (weeks 5-9)

- Polished UI (such as score, health bar, etc.)
- Polished start, instruction, level end, and replay, screens
- Polished vertical slice of final art in game level
- Final game audio demo

MILESTONE 6: Beta Build (by week 10)

- Deliver polished ONE MINUTE OF AWESOME GAMEPLAY
- Screenshot/video documenting one minute of awesome gameplay
- Personal Postmortem: This is a minimum of a 10 page evaluation/analysis paper where you talk about how the game progressed from beginning to end from the point of view of your discipline. You will talk about your role, what your expectations were, how your skill set began and grew to accommodate the needs of the project. You will also speak of barriers but in terms of team dynamics and in terms of holes in your skillset that you had to find ways to navigate. You will include an evaluation of your own skillset and how ready you feel to enter the working world as a developer.

MILESTONE 7: Showcase Event (tbd)

## Tools and Methods

**Twitter hashtag:** #cdmgamcap

**Trello:** All teams are invited to use **Trello** and/or Dicord as their project management platform. Whichever you use I need to be invited to the project. I expect to see a daily work post from each team member so that I know you're active with the project. Failure to do this may result in dropping your grade one letter. You need to be in the habit of documenting your process.

**Perforce:** All teams are invited to use **Perforce** for version control.

**Unity3D:** All teams are invited to use **Unity3D, Unreal 4, or Gamemaker Studio** for their game engine.

**Agile development:** teams will be developing using agile development.

some resources:

<http://agilemanifesto.org/>

[http://www.gamasutra.com/view/feature/6040/agile\\_game\\_development\\_with\\_scrum\\_.php](http://www.gamasutra.com/view/feature/6040/agile_game_development_with_scrum_.php)

<http://www.doolwind.com/blog/fun-over-features-manifesto-for-agile-game-development/>

## **The Fine Print**

### **Academic Integrity**

Work done for this course must adhere to the University Academic Integrity Policy, which you can review in the *Student Handbook* or by visiting [Academic Integrity at DePaul University](http://academicintegrity.depaul.edu) (<http://academicintegrity.depaul.edu>).

### **Students with disabilities**

If you feel you need an accommodation based on the impact of a disability please contact me privately to discuss your specific needs. All discussions will remain confidential. To ensure that you receive the most appropriate accommodation based on your needs, contact me as early as possible in the quarter (preferably within the first week of class), and make sure that you have contacted either:

PLuS Program (for students with LD or AD/HD) at:

<http://studentaffairs.depaul.edu/plus/>

The office of Students with Disabilities (for all other disabilities) at:

<http://www.studentaffairs.depaul.edu/SEP/studentswithdisabilities/>

## **Course Policies**

### **Changes to Syllabus**

This syllabus is subject to change as necessary during the quarter. If a change occurs, it will be thoroughly addressed during class, posted under Announcements in D2L and sent via email.

### **Online Course Evaluations**

Evaluations are a way for students to provide valuable feedback regarding their instructor and the course. Detailed feedback will enable the instructor to continuously tailor teaching methods and course content to meet the learning goals of the course and the academic needs of the students. They are a requirement of the course and are key to continue to provide you with the highest quality of teaching. The evaluations are anonymous; the instructor and administration do not track who entered what responses. A program is used to check if the student completed the evaluations, but the evaluation is completely separate from the student's identity. Since 100% participation is our goal, students are sent periodic reminders over three weeks. Students do not receive reminders once they complete the evaluation. Please see <https://resources.depaul.edu/teaching->

[commons/teaching/Pages/online-teaching-evaluations.aspx](https://commons/teaching/Pages/online-teaching-evaluations.aspx) for additional information.

### **Academic Integrity and Plagiarism**

This course will be subject to the university's academic integrity policy. More information can be found at <https://resources.depaul.edu/teaching-commons/teaching/academic-integrity/Pages/default.aspx>.

### **Academic Policies**

All students are required to manage their class schedules each term in accordance with the deadlines for enrolling and withdrawing as indicated in the [University Academic Calendar](#). Information on enrollment, withdrawal, grading and incompletes can be found at:

<http://www.cdm.depaul.edu/Current%20Students/Pages/PoliciesandProcedures.aspx>

### **Incomplete Grades**

An incomplete grade is a special, temporary grade that may be assigned by an instructor when unforeseeable circumstances prevent a student from completing course requirements by the end of the term and when otherwise the student had a record of satisfactory progress in the course. All incomplete requests must be approved by the instructor of the course and a CDM Associate Dean. Only exceptions cases will receive such approval. Information about the Incomplete Grades policy can be found at <http://www.cdm.depaul.edu/Current%20Students/Pages/Grading-Policies.aspx>

### **Students with Disabilities**

Students seeking disability-related accommodations are required to register with DePaul's Center for Students with Disabilities (CSD) enabling them to access accommodations and support services to assist with their success. There are two office locations:

- Loop Campus – Lewis Center #1420 – (312) 362-8002
- Lincoln Park Campus – Student Center #370 – (773) 325-1677

Students who register with the Center for Students with Disabilities are also invited to contact Dr. Gergory Moorhead, Director of the Center, privately to discuss how he may assist in facilitating the accommodations to be used in a course. This is best done early in the term. The conversation will remain confidential to the extent possible.

Please see <https://offices.depaul.edu/student-affairs/about/departments/Pages/csd.aspx> for Services and Contact Information.

**Attendance:** Students are expected to attend each class and to remain for the duration. Coming 15 minutes late or leaving 15 minutes early constitutes an absence for the student. The overall grade for participation drops one-third after any absence. Three absences for any reason, whether excused or not, may constitute failure for the course. If during a lab period, you are on social media instead of attending to the current project, to a level that you must be asked to cease the social media, it may be considered an absence as you are not actually present in the class work.

Class Discussion: Student participation in class discussions will be measured in two ways. First, students are highly encouraged to ask questions and offer comments relevant to the day's topic. Participation allows the instructor to "hear" the student's voice when grading papers. Secondly, students will be called upon by the instructor to offer comments related to the reading assignments. Students must keep up with the reading to participate in class discussion.

Attitude: A professional and academic attitude is expected throughout this course. Measurable examples of non-academic or unprofessional attitude include but are not limited to: talking to others when the instructor is speaking, mocking another's opinion, cell phones ringing, emailing, texting or using the internet whether on a phone or computer. If any issues arise a student may be asked to leave the classroom. The professor will work with the Dean of Students Office to navigate such student issues.

Civil Discourse: DePaul University is a community that thrives on open discourse that challenges students, both intellectually and personally, to be [Socially Responsible Leaders](#). It is the expectation that all dialogue in this course is civil and respectful of the dignity of each student. Any instances of disrespect or hostility can jeopardize a student's ability to be successful in the course. The professor will partner with the Dean of Students Office to assist in managing such issues.

Cell Phones/On Call: If you bring a cell phone to class, it must be off or set to a silent mode. Should you need to answer a call during class, students must leave the room in an undistruptive manner. Out of respect to fellow students and the professor, texting is never allowable in class. If you are required to be on call as part of your job, please advise me at the start of the course.