# Intermediate Game Design & Development

**USC School of Cinema-Television, CTIN 484/CTIN 489**

**Instructors:**
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RZC 207 MW 1-4PM

**Course Description:** This follow up to the classes, CTIN 488 Game Design Workshop and CTIN 483 Programming for Interactivity, introduces students to more advanced concepts in game design and development such as ideation, digital prototyping, interface design, usability testing, level design, quality assurance, team work, project planning 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. Teams should preferably be two students, but no more than three. Students who do not find their own team will be assigned one by the instructors. Students may not work alone: one of the core skills required in game design and production is collaboration. 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 game 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 and you may not use copyrighted material in your project unless the material has been legally cleared for use. (See Student Production Office in the lobby of the George Lucas Building for assistance with this process.)

**Meeting Information:**
Interactive Media Lab, G142 Main Room (below the Carson Stage)
MW 4-6PM
**Units:** 2/2
**Pre-requisites:** CTIN 488, CTIN 483

**Grading:**

| | |
|---|---|
| Class Participation & Attendance | 5 |
| Teamwork | 5 |
| Ideation Assignment | 10 |
| Torque Review Assignment (pass/fail) | 5 |
| Digital Prototype | 10 |
| Playtesting Report 1 | 10 |
| Design Plan | 15 |
| Visual Design Assignment | 10 |
| Playtesting Report 2 | 10 |
| Final Project & Presentation | 20 |
| Total: | 100 |

**Course content (summarized by class meeting)**

| Wk | Monday | Wednesday | Project Schedule |
|---|---|---|---|
| 1 | Course Overview, Expectations & Schedule<br><br>Inspirations: Innovation Case Studies | Torque 2D review | **- Ideation Assignment Given**<br>**- Torque Review Assignment** |
| 2 | Labor Day: No Class | Review & Critique Ideation Assignment v1<br><br>Tile Editor<br>Datablocks<br>Physics | **- Ideation Assignment Due** |
| 3 | Review & Critique Ideation Assignment v2<br>Form Teams<br><br>Lists (arrays)<br>String Functions | Setting Design Goals<br>Project Scope & Planning<br><br>Team meetings w/instructors to approve plans for digital prototype. | **- Form Production Teams**<br>**- Plans for Digital Prototype Approved** |
| 4 | Implementing Digital Prototypes | Implementing Digital Prototypes | Programming work in class |
| 5 | Implementation of Digital Prototypes | Present and Critique<br>Preparing for Playtest 1 | **- Digital Prototypes Due** |
| 6 | Playtest 1<br>(Held in usability lab) | Playtest 1 (Held in usability lab) | **- Playtesting of Prototypes** |
| 7 | Revising the Digital Prototype: Integrating player feedback; analysis of playtesting | Production Management: Design Plans | **- Playtest 1 Reports Due** |
| 8 | Visual Design Discussion | Review Design Plans w/instructors | **- Design Plans Due**<br>**- Visual Design Assignment Given** |

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| 9 | Sound Design Lecture<br>Sound library check-out | Visual Design Critiques | **- Visual Designs Due**<br>Production |
| 10 | In-class production | In-class production | Production |
| 11 | Alpha Reviews | Alpha Reviews | **- Alpha Build of Final Project Due**<br>Production |
| 12 | Playtest 2<br>(Held in usability lab) | Playtest 2<br>(Held in usability lab) | Production |
| 13 | Prioritization of Feedback | Implementation of Final Projects | **- Playtest 2 Reports Due**<br>**- QA Testing** |
| 14 | Quality Assurance Testing Methods | Quality Assurance Testing of Projects | **- Beta Build of Final Project Due** |
| 15 | Quality Assurance Testing of Projects | Quality Assurance Testing of Projects | **- "Gold Master" of Final Project Due** |

**Final Exam/Presentation: Time/Date TBD**

**More on the Assignments**

Ideation Assignment: The Ideation exercise will be based on several example games brought in as inspiration. These are "small games" with "big ideas"; they exhibit innovative design goals and excellent execution. Students will work in teams (not necessarily their final production teams) and choose one of the games shown in class. The team will analyze this game and break down its core mechanic, and then they will come up with 4-5 significant variations of the game which they will create simple visual sketches of. These concepts will be presented and critiqued in class and will serve as both the basis for the digital prototyping assignment and assist with the selection of final teams.

Forming Teams: As noted above, students must form their own production teams before week 3, or they will be assigned a team by the instructors. Based on the Ideation concepts presented in week 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 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.

Digital Prototyping Assignment: These rough working versions of student ideas will focus on getting the game mechanics up and working so that they can be playtested in the EA Game Innovation Lab. The prototypes will not include extensive art or animation, but will allow player control of the system and easy designer access to important variables that can help tune the system during playtesting. Issues found during the playtesting assignment must be addressed by the designers before final green light for the production stage will be given.
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. For each test, the teams will prepare a test report, evaluating the results of the test and prioritizing changes to the design.

Design Plan:
The design plan will be a "working document" detailing all of the planned features for the game, the overall flow of the application and should include wireframes diagramming all game screens planned for production.

Visual Design Assignment:
The purpose of the visual design assignment is to explore several very different ideas for the look and feel of the game. Students will create 3 very different design boards for review and critique.

Reviews & Critiques: In addition to formal testing, projects will also undergo extensive peer review and critiqued 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' working prototypes in order to fully flesh out the user 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: prototype, playtesting, approval for final project, alpha review, usability testing, beta review, and gold master. Projects that do not go through these milestones within the class sessions will not be considered for submission of the Final Project.

Final Presentations & Publication: The final deliverables for the class are a finished game project that can be published to the Interactive Media Division website. The class will also present their final projects for a final review and critique by invited guests during the final exam time for the class. Presentations should consist of a concise explanation of core game play, features, and innovative aspects of the project and a brief, explanatory play-through.

**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 professor before the assignment due date 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.

**Attendance Policy:**
Punctual attendance at all classes is mandatory. Students arriving late or leaving early will be marked absent from class. The following guidelines are from the Interactive Media Division handbook regarding absences and grading and apply to all students.

Guidelines for absences affecting grading

- Two unexcused absences: lowers grade one full grade point
- 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)

**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 8:30am - 5:00pm Monday through Friday. The phone number for DSP is (213) 740-0776.

**Academic Integrity:**
The School of Cinema-Television expects 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.