

# Game Design Workshop

## USC School of Cinematic Arts, CTIN 488

**Instructors:** Chris Swain, Dan Arey, and Vincent Diamante

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**Course Description:** CTIN 488 is the foundation course for game design education at USC. It is a required course for all students majoring and minoring in interactive entertainment and games from the School of Cinematic Arts and Viterbi School of Engineering. The foundation mentioned is constructed from a codified language for games and set of design methodologies that collectively we call “playcentric design”. Think of playcentric design as a USC school of thought for games. It is intended to provide flexible skills and knowledge that will enable you to create playable systems more efficiently and collaborate with others more effectively. Playcentric design strives to enable the student to:

- 1) Understand Fundamental Theory – You will learn about the Formal, Dramatic, and Dynamic elements of games and how the three interrelate
- 2) Learn core development process – This process is independent of software tools (which change over time). It includes understanding iterative design, prototyping, playtesting, presentation, and collaboration
- 3) Practice, Practice, Practice – Everyone will design many games hands-on regardless of technical skills. Class assignments are designed to make good additions to a student’s demo reel. In addition everyone will get lots of experience critiquing and analyzing games as playable systems.

CTIN 488 is designed to provide the foundation of knowledge for succeeding throughout the game program at USC and becoming a professional game designer.

**Meeting Information:**

Lecture (all students attend):

*When:* Tuesdays 7-9 pm *Where:* THH 208

Labs (each student enrolls in one of the following):

- a) *When:* Mondays 6 – 8 pm *Where:* CSS G142
- b) *When:* Tuesdays 2-4 pm *Where:* CSS G142
- c) *When:* Thursdays 10 am – 12 pm *Where:* CSS G142
- d) *When:* Fridays 2-4 pm *Where:* CSS G142 (Marshall students must take this lab section)

**Office Hours:** Tuesdays at 1 pm (by appointment)

**Pre-requisites:** N/A

**Evaluation of student performance:**

Play Experiments	10
In-Class Design Exercises	10
Design Project 1	15
Design Project 2: Feature Design	15
Design Project 3	20

Quizzes (3)	30
<b>Total:</b>	<b>100</b>

Week 1: Overview of the Course and Introduction to Game Structures

Week 1 Lecture (8/28): Overview of the course. What is a game? Formal and dramatic structures of games. Prototyping, playtesting and iterative design.

Reading:

- “Game Design Workshop”, by Swain and Fullerton
- Chapter 1-2

Week 1 Lab: Re-design a simple game system – Play Experiment #1

Week 2: Formal Elements of Games: Objectives, Procedures, Systems and Rules

Week 2 Lecture (9/4): Discussion of elements that make up the formal structures of game systems. Analysis of game rules from classic games.

Reading:

- “Game Design Workshop”, by Swain and Fullerton
- Chapters 3 and 6

Week 2 Lab: Conceptualizing and brainstorming game ideas – Play Experiment #2

Week 3: Dramatic Elements of Games: Metaphor, Characters, Roles, and Story

Week 3 Lecture (9/11): Applying traditional tools of drama to game design. Analysis of character, plot, story and metaphor in well-known games.

Week 3 Lab: Prototyping game systems. **Design Project #1 Assigned: Game variant prototype.** - Play Experiment #3

Week 4: Dynamic Elements of Games: Emergence

Week 4 Lecture (9/18): Complexity Theory, Conway's Game of Life, The Sims, Gearheads, SimCity, RollerCoaster Tycoon. Testing your game for functionality, completeness and balance.

Reading:

- “Game Design Workshop”, by Swain and Fullerton
- Chapters 4 and 7

Week 4 Lab: Playtest first draft Design Project #1

Week 5: Guest Speaker

Week 5 Lecture (9/25): guest speaker tbd

Reading:

- Game Design Workshop
- Chapters 5, 8, 9, and 10

Week 5 Lab: Playtest second draft Design Project #1 - Play Experiment #4

### Week 6: Creating Interesting Choices

#### **Quiz #1**

Week 6 Lecture (10/2): Game theory, Minimax theory, strategy games. Tic-tac-toe, Connect Four, Chess, Warcraft III, many others.

Week 6 Lab: Playtest final draft Design Project #1

### Week 7: Social Play

Week 7 Lecture (10/9): Social roles and player interaction. Killer, Pictionary, You Don't Know Jack, Acrophobia, NetWits.

Week 7 Lab: **Feature Design Assignment**

### Week 8: Managing Resources

Week 8 Lecture (10/16): Types of resources, information structures, game economies. Magic: The Gathering, Settlers of Catan, Pit.

Week 8 Lab: Present first draft of Feature Design Assignment

### Week 9: Puzzle Games

Week 9 Lecture (10/23): Set, Tetris, Smart Games, MetaSquares, Incredible Machine, Myst.

Week 9 Lab: Present second draft of feature design assignment

### Week 10: Narrative Play

#### **Quiz #2**

Week 10 Lecture (10/30): Development of interactive drama. Interfilm, Kino-Automat, Eliza, Catz.

Week 10 Lab: Present final draft of feature design assignment

### Week 11: Role-Playing Games and Online Communities

Week 11 Lecture (11/6):

- A) Roleplaying Games: Dungeons & Dragons, Hack, Diablo, Ultima Online. M.U.L.E., Habitat, Battle.net, Sony Station.
- B) Online Communities – The Nine Principles of Community Design

Week 11 Lab: **Design Assignment 3**

### Week 12: Guest Speaker

Week 12 Lecture (11/13): Guest Speaker: tbd

Week 12 Lab: Playtest first draft of Design Assignment 3

### Week 13: Concept through Delivery: Stages of Development and Business of Games

Week 13 Lecture (11/20):

- A) Concept through Delivery - Discussion of teams, process and documentation. Design and planning documents from actual products will be distributed.
- B) Business of Games - Game market statistics, publisher/developer relationships, royalties & deal structures.

Reading:

Game Design Workshop

- Chapters 12 and 14
- Chapters 15 and 16

Week 13 Lab: Playtest second draft of Design Assignment 3

#### Week 14: Guest Speaker

Week 14 Lecture (11/27): Guest Speaker: tbd

Week 14 Lab: Playtest third draft of Design Assignment 3

#### Week 15: Course Wrap Up

##### **Quiz #3**

Week 15 Lecture (12/4): Final Presentation Night, Quiz #3, and Course Wrap-Up

Week 15 Lab: Final Playtest

#### **Design Assignment Playtest/Critique Requirements:**

Participating in in-class play tests is a requirement of the class. During each play test session, the class will break up into as many groups as there are games to be tested. Designers must quickly and clearly explain their game system to the play testers and lead them through a 20-minute play session.

After the group has played the game, the designers must lead a critique of their own game, eliciting as much feedback as possible from their play testers. At the end of the session, the designers must submit a) a copy of the game description and rules, and b) a critique document from the comments of the play testers. Both of these documents will be evaluated as part of the assignment grade.

#### **In-Class Design Exercises:**

The In-Class Design exercises will consist of short, focused assignments that can be completed and playtested during the lab time. These exercises will give students hands-on experience with core concepts in game design, including breaking and balancing systems, changing game variables and system scope, designing for meaningful choice, brainstorming, conceptualization, and responding to player feedback.

#### **Reading Requirements:**

The textbook is "Game Design Workshop: Designing, Prototyping and Playtesting Games." It is available at the University bookstore or online at Amazon.com and BarnesandNoble.com.

#### **Course Website Address:**

<http://www.swaincorp.com/488>

#### **Play Experiments:**

As part of this class each student will conduct four play experiments. Play Experiments are done in groups of 3-5 using the 488 collection of board games. Each Play Experiment will be

discussed by the class. The deliverable for each experiment will be defined by student groups and approved by the instructor. Each student will be responsible for completing the 5 experiments across 15 weeks of the class.

### **Missing an Exam, Incompletes:**

The only acceptable excuses for missing an exam or taking an incomplete in the course are personal illness or a family emergency. Students must inform the professor before the exam 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.

### **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 and 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.

### **Instructor Bios:**

CHRIS SWAIN

Chris is an Assistant Professor at the USC School of Cinema and the Co-Director of the Electronic Arts Game Innovation Lab at USC. He has been a professional game designer for 15 years. He designed over 150 interactive products in industry before coming to academia.

His research projects in the EA Game Innovation Lab at USC include:

- *The Redistricting Game* – a game designed to educate US voters about the issues of congressional redistricting. The project strives to engage and empower citizens to get involved in their own governance – <http://www.redistricting.org>. Funding is by the USC Annenberg Center for Communications.
- *Immune Attack* – realtime strategy game that teaches immunology. It's set in the human blood stream. Collaborators are USC's GamePipe Laboratory, Brown University, and Federation of American Scientists. Funding is by the National Science Foundation - <http://www.fas.org/immuneattack/>
- *ELECT Bi-Lat* – simulation game that teaches bi-lateral negotiation and cultural sensitivity to US military officers in Iraq. Collaborators are USC's Institute of Creative Technologies. Funding is by the US Army.
- *ELECT urbanSIM* – simulation game that teaches urban battlefield management to US military commanders in Iraq. Collaborators are USC's Institute of Creative Technologies. Funding is by the US Army.
- *America's New New Deal* – a game that examines America's shift from a New Deal economy to an ownership economy. Based on data from prize winning LA Times reporter Peter Gosselin. Collaborators are the LA Times. Funding is by the Rockefeller Foundation.

Chris is co-author of the book *Game Design Workshop*, published 2004 by CMP Books. He specializes in original play mechanics and new kinds of interactivity.

Previously, Chris was a founder of game developer, Spiderdance, Inc. Spiderdance's mass audience interactive television games included NBC's *Weakest Link*, MTV's *webRIOT*, The WB's *No Boundaries*, History Channel's *History IQ* among others.

Prior to Spiderdance, Chris was a founding member of the New York design firm R/GA Interactive. As Executive Producer he created over 150 games and interactive products for clients that include Disney, Sony, Microsoft, America Online, Warner Brothers, BBC, PBS, Children's Television Workshop, Discovery Channel, and Activision among many others. Notable projects include:

- Sony's *Multiplayer Jeopardy!* and *Multiplayer Wheel of Fortune*
- MSN's *NetWits* - the first mass audience online gameshow
- PBS's *Frank Lloyd Wright: Poetry of Structure* - which is the convergence companion to the Ken Burns' documentary.

His work has received numerous industry honors including best Family/Board Game from the Academy of Interactive Arts & Sciences, ID Magazine's Interactive Design Review, Communication Arts Interactive Design Annual, multiple gold Invision awards, iMix Best of Show, The Digital Coast Innovation award, IBC's Nombre D'Or, and Time Magazine's Best of the Web.

#### E. DANIEL AREY

Dan Arey is currently Creative Director at game developer Ready at Dawn. He was previously the Creative Director of Naughty Dog studios, a division of Sony Computer Entertainment America. As a writer, director, and senior designer with over 19 years of experience, Dan has worked with publishers ranging from Electronic Arts, Accolade, Sega of America, Crystal Dynamics, and Sony.

An early proponent of interactive and convergent media, Dan led the earliest titles in this regard during his tenure as Design Manager for Crystal Dynamics. At Crystal, Dan designed games using film content and stronger narrative techniques as early as 1992 and has been an industry leader in story enhanced gaming for more than a decade.

Continuing his career at Naughty Dog, Dan has been involved in the design of the Crash Bandicoot and Jak and Daxter series, two best selling franchises that have together sold more than 35 million units.

Dan has been involved in the design and IP development of the following best selling titles:

- Uncharted: Drake's Fortune (PS3) - 2007
- Daxter (PSP) - 2006
- Jak X (PS2) – 2005
- Jak 3 (PS2) - 2004
- Jak II (PS2) - 2003
- Jak and Daxter: The Precursor Legacy (PS2) - 2001
- Crash Team Racing (PS1) - 1999
- Crash 3: Warped (PS1) - 1998
- Crash Bandicoot 2: Cortex Strikes Back (PS1) – 1997
- Gex: Enter the Gecko (PS1) - 1997
- Blood Omen: Legacy of Kain - 1996
- Gex 3DO - 1995
- Blazing Dragons (Dragon Tails license w/ Terry Jones of Monty Python) (PS1) - 1994
- Total Eclipse (3D0) – 1993
- Crash 'n Burn (3D0) – 1993

Dan has been a contributor to Game Developer Magazine, Creativity Magazine, and a frequent lecturer at the Game Developers Conference, E3, DICE, SIGGRAPH, Writer's Guild of America, and USC School of Cinematic Arts.

## VINCENT DIAMANTE

Vincent Diamante is a music composer, writer, and artist living in Los Angeles. He has provided audio for over a dozen video games spanning all platforms, from mobile handsets to next-generation consoles. Some of his projects include the indie games: *Dyadin* and *Cloud*; and research games *Immune Attack* and *The Redistricting Game*. He is currently composing for the not-yet-announced PS3 title from developer ThatGameCompany at Sony Santa Monica.

In addition Vincent is a veteran of video games journalism, having co-founded noted New Games Journalism representative [Insertcredit.com](http://Insertcredit.com). He regularly contributes to other media outlets as a freelance writer.

Vincent holds a BM in Electroacoustic Media from USC's Thornton School of Music and an MFA in Interactive Media from the USC School of Cinematic Arts.