

Sound Design for Games

CTIN 406L (2 Units)

Spring 2012

Objective Familiarity with the technical and aesthetic considerations of implementing audio for video games. This course covers the technical, logistical, organizational, and creative elements of the major production areas for games: dialog, sound effects, ambience, and music. By the end of the course, students should be familiar with the various creative and technical challenges involved in creating a rich and appropriate soundscape for a video game and be comfortable creating original audio for student game projects within the Interactive Media department and beyond.

Concepts We will discuss basic goals for audio production as well as more advanced implementation challenges, looking at specific examples in existing games and other interactive media. Topics include: developing non-repetitive sound effects and score; building sounds that intelligently respond to game state; use of real-time multichannel technologies to create an immersive soundscape; the challenges of scheduling, organization, and hard/soft/wetware resource constraints with techniques for circumvention; the audio production pipeline and supporting tools; and creative uses of sound specifically suited to gameplay. Throughout the course, students will be utilizing techniques learned in class to create and implement their own audio for a game started outside of the class.

Instructor Vincent Diamante
Office hours: 5-6 PM in RZC 119 (by appointment)
Email: vincent.diamante@gmail.com

Prerequisite None. Familiarity with Windows is assumed.

Lecture/Lab Fridays 2:00 PM to 5:00 PM
RZC 119

Grading The following point structure will be used in determining the grade for the course. Final grade will be based upon the total points received.

Lab Assignments:	100
Homework:	50
Midterm Exam:	50
Midterm Project:	50
Final Exam:	50
Final Project:	100
TOTAL	400

Policies *Make-up policy for exams:* To make up for a missed exam, the student must provide a satisfactory reason (as determined by the instructor and university policy) along with proper documentation. Make-up exams are only allowed under extraordinary circumstances.

Projects: It is the student's responsibility to turn in projects on or before deadlines as set by the instructor.

Late Assignments: There will be a 2% reduction of the project's grade for each calendar day it is late.

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.

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 me as early in the semester as possible. DSP is located in STU 301 and is open 8:30 a.m. - 5:00 p.m., Monday through Friday. The phone number for DSP is (213) 740-0776.

Sound Design for Games

CTIN 406L (2 Units)

- | | |
|----------------|---|
| Week 1 (1/13) | An Introduction to Game Audio <ul style="list-style-type: none">- Overview of the class, the role of audio in games, comparing games with other media, and close listening. |
| Week 2 (1/20) | Sound Synthesis and Reproduction on Computers <ul style="list-style-type: none">- Sound basics, digital storage and playback, compression techniques, and management basics. |
| Week 3 (1/27) | Sound Engineering – A Game Design Primer <ul style="list-style-type: none">- A historical perspective on game and sound design, audio engineering and game implementation, digital signal processing basics. |
| Week 4 (2/3) | Game Audio Production and Tools <ul style="list-style-type: none">- An overview of game production process, game audio middleware tools hands-on. |
| Week 5 (2/10) | More (Game) Audio Tools <ul style="list-style-type: none">- Hardware and software including: digital audio editors, multi-track sequencers, microphones, interfaces, and portable recorders. |
| Week 6 (2/17) | Modern Immersive Audio Design <ul style="list-style-type: none">- More game implementation concepts as well as the Eastern Western game design divide, surround sound design, and mobile/casual design. |
| Week 7 (2/24) | Sound Design as Game Design <ul style="list-style-type: none">- Case studies, advanced audio design, and introducing the midterm and final projects. |
| Week 8 (3/2) | MIDTERM EXAM |
| Week 9 (3/9) | Techniques, Vocabulary, and Technology <ul style="list-style-type: none">- Walter Murch, game audio design, hot and cold, and heuristic mixing. |
| Week 10 (3/16) | SPRING BREAK |
| Week 11 (3/23) | Interactive Music Design and Composition <ul style="list-style-type: none">- Historical perspective, case studies, break down and analysis, the interactive music project. |
| Week 12 (3/30) | Business of Game Audio and...? <ul style="list-style-type: none">- Historical perspective, contracting issues, case studies, and something really weird. |

- Week 13 (4/6) Audio as Production and Pre-Production
- Pre-production audio design, sketching and scoring for prototypes and target renders, and in-house audio design responsibilities.
- Week 14 (4/13) The Perils of Size and Scale, Production and Business
- The jaded and the optimistic duke it out, the connection between outsourcing and changing game audio design needs, voice acting and dialog direction.
- Week 15 (4/20) The Final Mix – New Tools and Design Paradigms
- The latest and greatest, including crazy indies and unfinished prototypes.
- Week 16 (4/27) Review for Final Exam / Final Project
- Week 17 (5/7) FINAL EXAM DATE / FINAL PROJECT DUE