MTEC 55B: ADVANCED SOUND DESIGN FOR GAMES

Foothill College Course Outline of Record

Heading	Value
Effective Term:	Summer 2025
Units:	4
Hours:	3 lecture, 3 laboratory per week (72 total per quarter)
Advisory:	Not open to students with credit in MUS 84B.
Degree & Credit Status:	Degree-Applicable Credit Course
Foothill GE:	Non-GE
Transferable:	CSU
Grade Type:	Letter Grade (Request for Pass/No Pass)
Repeatability:	Not Repeatable

Description

Designing and implementing sound effects for games and interactive media. Recording custom sound effects and working with commercial sound effects libraries. Advanced techniques for designing hard effects, foley sounds, and ambient backgrounds. Industry-standard workflows for sound effects implementation with audio middleware solutions. Hands-on experience with professional examples of game audio sound design on desktop, console, and mobile platforms. Examination the work of game developers from diverse backgrounds and cultures.

Course Objectives

The student will be able to:

1. Understand professional game audio workflows.
2. Create complex, multi-layered sound effects.
3. Design sophisticated sound effects playback systems using audio middleware.
4. Discuss the work of game developers from diverse backgrounds and cultures.

Course Content

1. Study and analysis of game audio sound design techniques and middleware audio implementation workflow
   a. Understanding game audio workflows
   b. Assessing game audio requirements
   c. Acquiring sound assets using studio and field recording
   d. Processing game audio with plug-ins
   e. Applying appropriate limiting and dither algorithms for resolution optimization
   f. Exporting digital audio file formats
   g. Implementing finished sound elements using audio middleware
   h. Playtesting game levels to assess effectiveness of sound effects implementation
2. Examination of the work of game developers from diverse backgrounds and cultures

Lab Content

1. Lab content includes topics such as recording techniques, sound design techniques, plug-in processing, mixing and mastering, printing audio to stems, exporting file types, and implementation with audio middleware.
2. Other topics may include subjects such as field recorder, sound library selection, and advanced asset management.

Special Facilities and/or Equipment

1. When taught on campus: classroom with appropriate number of digital audio workstations and appropriate software; computers running appropriate operating system; projection system for video and multimedia content; loudspeaker system to accurately reproduce audio examples.
2. When taught via Foothill Global Access: on-going access to computer with email software and capabilities; email address; JavaScript-enabled internet browsing software; digital audio workstation with appropriate software.

Method(s) of Evaluation

Methods of Evaluation may include but are not limited to the following:

Written assignments that analyze sound design techniques
Tests on designing, processing, mixing, mastering, and implementing sound effects as presented in the course materials
Multiple projects delivering completed sound design elements demonstrating understanding of class material and assignments

Method(s) of Instruction

Methods of Instruction may include but are not limited to the following:

Lecture presentations and classroom discussion of the techniques for designing sound effects for games
In-class viewing of historically significant video games followed by instructor-guided interpretation and analysis
Presentations of major sound design projects followed by in-class discussion and evaluation
Demonstration of techniques for interactive implementation using audio middleware

Representative Text(s) and Other Materials

Audiokinetic. Wwise 101 Certification. 2023.

Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments

1. Written critiques and analysis of sound design projects in film, television, video games, and interactive media.
2. Written summaries documenting technical and artistic elements for corresponding submitted sound design projects.
3. Hands-on exercises and guided tutorials to practice sound design and implementation concepts and techniques.

Discipline(s)

Commercial Music