GAME 367: Sound and Music for Games

George Mason University
Computer Game Design Program

3 Credit Hours
Prerequisite: GAME 250

Professor Matt Nolan
Classroom: AB 2002

Class meets: Tuesday 1:30-4:10 pm
Office: Art & Design RM 2023

Email: mnolan4@gmu.edu
Phone: 703-993-9591

Course Description:
Combined studio and lecture course that will focus on the composition, editing, processing, mixing, scripting and integration of sound effects, narration, and music into computer games. Time, frequency, and amplitude domain digital production and post-production techniques, MIDI control and processing will be reviewed. Audio mixing will be studied, as well as the differences between linear and nonlinear game sound production. Students will explore Audio Middleware and Game Engines, with a focus on understanding the means for creating High Quality Sound and Music for Games.

Portfolio:
Students are expected to build and maintain a portfolio of original sound effects and music. This portfolio will be reviewed throughout the semester. Students are expected to have these sounds saved on a physical drive (USB) named with their first initial and last name. Files should be well organized into categories to facilitate easy review and access to files when working on projects. You should keep this with you every time you come to class, so you can share your work if you are asked to.

The Portfolio is due one week before your final exam. NO LATE PORTFOLIO WILL BE ACCEPTED!

An “Average” Portfolio has about:
30 Sound FX
10 Voice Recordings
5 Musical Compositions
4 Written Assignments
2 Finished Tutorials
| **Midterm** | Starting in Week 2, students will create, post-produce, and mix the sound and music for a pre-existing computer game ‘mod’ (level) that will be due at Midterm (the week after Spring Break). During the second week of class, students will propose a concept for their Mid-Term Project: the intended audience and purpose, the origin of the computer game, and the original resource(s) for the sound and music. At Mid-Term, students are required to present and submit an original produced, post-produced and mixed complete audio score to a small/limited computer game map/level using a minimum of 10 original audio sources, including interface sounds/music, menu sound/music, character sound/music, environmental sounds, asset sounds, and level (theme and battle) music. Students may choose to use their own, or a pre-existing computer game to score the music and sound. |
| **Final Project:** | In the 10th week of class, students will write a proposal detailing their final project: the intended audience and purpose, the origin of their chosen ‘original’ computer game, and source(s) for the sound and music. In the final week of class, students will provide a 20-minute presentation discussing the technical, structural and artistic content of their final project. During the final week of the semester, students will present and submit an originally produced, post-produced, and mixed complete audio score, including MIDI controlled resources to a complete original multi-level (3+) computer game with a minimum of 20 original audio sources (including narration, interface sounds/music, environmental sounds, asset sounds, and level music). |
| **Objectives** | To build student awareness of the techniques, methods, and aesthetic choices used to ensure quality sounds, narration, and music for computer |
games through existing examples, peer critique and discussions, and writing, producing, and post-producing original sounds and music for computer games. To Create two or more playable computer games. To reinforce the best practices for group development of a game. To reinforce a game designer's ability to create their own sound and music for games. To Strengthen a game designer's ability to communicate in musical and technical terms.

Requirements

At the beginning of each class meeting, students should be prepared to discuss Homework, topic assignments, and sound/music examples. In addition, students should be prepared to discuss with the class the status and stage of their project(s), as well as any design, structural, technical, or theoretical and historical issues. A lecture or activity will follow, and then students are expected to work during class on their assignments or project. A series of short projects will be assigned to compliment most lectures.

The assigned readings, or other required materials will be online on Blackboard or in the Johnson Center Library.

Helpful Texts


Grading:

Participation, homework, and mini-projects(25%)

Participation entails:

Students Come to Class Every Week (See Attendance Policy for more Details)
Students prepare for and actively engage in class discussion (e.g., demonstrate active listening, not distracted by electronics or peers)
Students thoughtfully engage in in-class assignments and activities Students constructively participate in group activities
Students participate in class discussion by Raising informed discussion points; Connecting discussion to reading material, news, and relevant experiences; Asking questions; Listening to other perspectives; Sharing the floor with others; and Posting thoughtfully to course discussion boards.

Sound, Music, and scripting portfolio (20%)

Mid-term presentation and project (20%)

Final presentation and project (35%).

To receive a grade of "A" a student must achieve a minimum average grade of 90% on the course work requirements.

To receive a grade of "B" a student must achieve a minimum average grade of 80% on the course work requirements.

To receive a grade of "C" a student must achieve a minimum average grade of 70% on the course work requirements.

To receive a grade of "D" a student must achieve a minimum average grade of 60% on the course work requirements.

Failure to receive a "D" grade will result in a grade of "F".

If you have a documented learning disability or other condition that may affect academic performance you should:

1) make sure this documentation is on file with Disability Services (SUB I, Rm. 4205; 993-2474; http://ds.gmu.edu) to determine the accommodations you need;

2) talk with me to discuss your accommodation needs.

George Mason University is committed to providing a learning, living and working environment that is free from discrimination and a campus that is free of sexual misconduct and other acts of interpersonal violence in order to promote community well-being and student success.

Attendance Policy:

Please arrive to class on time. You are allowed ONE unexcused absence. Your second and following unexcused
absences will lower your final grade by one letter grade. 5 unexcused absences will result in a final grade of “F”.

The integrity of the University community is affected by the individual choices made by each of us. Mason has an Honor Code with clear guidelines regarding academic integrity.

Three fundamental and rather simple principles to follow at all times are that:

1) all work submitted be your own;
2) when using the work or ideas of others, including fellow students, give full credit through accurate citations;
3) if you are uncertain about the ground rules on a particular assignment, ask for clarification.

No grade is important enough to justify academic misconduct.

Plagiarism means using the exact words, opinions, or factual information from another person without giving the person credit. Writers give credit through accepted documentation styles, such as parenthetical citation, footnotes, or endnotes. Paraphrased material must also be cited, using MLA or APA format. A simple listing of books or articles is not sufficient.

Plagiarism is the equivalent of intellectual robbery and cannot be tolerated in the academic setting. If you have any doubts about what constitutes plagiarism, please see me.

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<td>Week 2</td>
<td>Mid-term Proposals/Form Groups/Music Composition/Harmonic Progressions/Melody/Melody Activity/Cue Sheets/Songwriting HW/Group Cue Sheet HW</td>
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<td>Week 3</td>
<td>Sequencing/MIDI Controllers/Synthesis/Quantization/Song Rendering HW</td>
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<td>Week 4</td>
<td>Sound Libraries vs DIY Sounds Discussion/Logic Pro X/Samplers(EXS 24 instrument in Logic)/SFXR Sound Synthesizer/SFXR Sampler HW</td>
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<td>Week 5</td>
<td>Signal Processing Review/Mixing Board/Mixing/Automation/Bouncing Week 6-Group Work/Voice Acting and Recording for Games Activity Week 7-Rough Draft review and feedback</td>
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<td>Week 6</td>
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<td>Final Project Concept Pitch and Team Forming/Group Storyboard and Cue sheet HW</td>
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<td>Review Story Boards/Cue Sheets HW/Intro to Unity Audio</td>
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<td>Unity Audio/Team Unity Audio Toy in class assignment/Final Project Check-in</td>
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<td>Game Scoring Techniques and Tropes/Elias/Non-Linear Composition Tricks/Advanced Logic for Immersive Audio/Elias Composition HW</td>
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<td>Week 11</td>
<td>Review Elias Compositions/WWISE/CUBE/Unity HW Week 14-Group Work On Final Projects SFX and Immersion Check-in</td>
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<td>Turn in Wwise Tutorials/Group Work On Final Projects</td>
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