

MEDI 481 The Sonic Experience

FA2023

Course Details

Credits: 3

Prerequisites: MATH 220 Calculus I or MATH 220H Calculus I: Honors

Time: Thursday, 9-11:50 AM

Place: Building 33, Room 618

Instructor: Teerath Majumder

Instructor Email: tmajumder@colum.edu

Office Hours: Wednesday, 11 AM-1 PM and 2 PM-3 PM on Zoom; Thursday, 1:30-2:30 PM at 33, 601H; or by appointment

Course Description

This course is designed for students interested in or already engaged in interdisciplinary coursework in music, audio arts, computer programming and interactivity. The Sonic Experience will provide a unifying framework of contexts, theories, and applications to enhance students' understanding of and competencies in these allied Music Technology fields.

Learning Outcomes

Students who have successfully completed this course will have demonstrated that they are able to:

- Actively participate in and contribute to ongoing aesthetic and technological discourses in the sonic arts and music technology using terminology and skills appropriate for the discipline.
- Articulate the aesthetic essence, intention, and process of their artistic practice in both verbal and written form.
- Situate their artistic research in a historical and contemporary context of sonic arts or music technology practices and theory.
- Present and document their work in formats suitable for public dissemination and continued development.

Topic: Space as Instrument

The origin of a sound is only one of the factors that shape the sound's characteristics and our perception of it. It is rather obvious to someone who works with sounds that the space in which a sound is generated affects it in numerous ways. The effects of space may not always be obvious to us since we become used to the acoustic qualities of the spaces we inhabit regularly. On close examination, the effects of those

qualities on our daily experience begin to emerge revealing their socio-political implications. In sonic arts, these qualities are not only taken into account but often actively shaped by artists in both physical and virtual spaces. Space becomes a vessel for meaning-making.

This course is meant to introduce the students to a range of approaches observed in understanding spatial characteristics and creating spatial sonic art that might inform their own creative approaches. Students will have the opportunity to apply concepts pertaining to acoustics, spatialization, and social functions of space in their creative output. They will also have the chance to converse with artists whose work often involves careful consideration and manipulation of space.

Activities

- Lectures on technical and aesthetic concepts of space
- Demonstration of tools used in the manipulation of space
- Readings on the relationship between space and sound
- Visiting campus facilities with interesting acoustics and immersive technology
- Discussions with artists working in the field
- Quizzes
- Creative projects
- Proposal for the final project
- Final project accompanied by a paper

Evaluation

Students will be evaluated on their performance in three quizzes, two creative projects, a proposal for the final project, and a final creative work accompanied by a short paper (1000-2000 words). The assignments will be weighted as follows:

- Quizzes - 30%
- Creative projects - 30%
- Final project - 40%
 - Proposal - 10%
 - Creative work - 20%
 - Paper - 10%

The students will complete the creative projects and the final project in **groups of not more than 3 people**.

The grading rubric for the creative projects and the final creative work is as follows:

Meeting technical requirements	5
Creative intent	3
Clarity of comments	2
Total	10

The grading rubric for the proposal is as follows:

Description of project	1
Timeline of implementation	1
Division of tasks	1
Research plan	1
Bibliography	1
Total	5

The grading rubric for the paper is as follows:

Statement of creative intent	1
Research findings	1
Evaluation of outcome	1
Difficulties faced	1
Possible improvements	1
Total	5

If a student is unable to turn in their work by the posted deadline, they must inform the instructor in advance. Otherwise, 10% of the score will be deducted for every 24 hours beyond the posted deadline.

Grading Scale

93% ≤ A ≤ 100%	73% ≤ C < 77%
90% ≤ A- < 93%	70% ≤ C- < 73%
87% ≤ B+ < 90%	60% ≤ D < 70%
83% ≤ B < 87%	0% ≤ F < 60%
80% ≤ B- < 83%	I = Incomplete
77% ≤ C+ < 80%	

Texts

Students will be assigned to read journal articles and book chapters relevant to the concepts that will be covered in the course. Refer to the reading assignments on Canvas for links to the texts. Students are expected to complete all the assigned readings and be prepared to contribute to in-class discussions about them.

Hardware Requirements

It is preferred that the student bring their own laptop and a pair of headphones to the class to participate fruitfully in the classroom activities.

Software Requirements

Students are expected to install Max and REW on their computers. The software will be used for demonstrations, class activities, and assignments. Temporary licences for Max will be provided by the college as needed.

Communication

Students are encouraged to reach out to the instructor with any questions regarding the course through Canvas messages.

Academic Honesty

Collaboration between students in this course is strongly encouraged. Students are urged to exchange ideas, opinions, and information constantly, and to help each other with research and projects. However, each student is responsible for the completion of their own assignments.

In this class, you will be expected to attribute due credit to the originator of any ideas or words that you incorporate into your own work. ***Any borrowed text, code, and sound must be cited.***

Disability

If there are conditions that prevent a student from attending classes or participating fully in academic activities, the student is encouraged to consult Services for Students with Disabilities as soon as such conditions present themselves.

General Reference

School of Media Arts: Tom Dowd, Interim Dean - tdowd@colum.edu

Department of Audio Arts and Acoustics: Ben Sutherland, Chair - bsutherland@colum.edu (department phone: 312-369-8820)

Semester Schedule

Week	Module	Lecture Topic	Activity	Reading	Assignment
1		Introduction to the course and Max	Introductions		
2	Understanding space	Reflection	Max: Exploring delay and filters	Gershon	
3		Position	Max: Making a stereo panner	Zelli	
4		Social functions of space	Conversation: How spaces make us feel	Born	Quiz 1
5		<i>Creative applications: Mothership Calling</i>	<i>Conversation with Nicole Mitchell</i>	Stocker	
6		Creative applications: Xenakis's Polytopes	Visit: Student Center stairwell Conversation: Architecture and sound	Sterken	Project 1
7	Creating space	Designing physical spaces	Visit: Reverberation Chamber	Bild, Coler, Pfeffer and Bertolini	
8		Designing virtual spaces	Max: Emulating a rectangular room	Västfjäll, Larsson and Kleiner	Quiz 2
9		Emulating (un)real spaces	REW and Max: Recording and using IRs	Sterne	Final project: Proposal
10		<i>Guest lecture: Ben Sutherland</i>			Project 2
11	Playing with space	Virtual spatialization	Visit: Immersive Lab	Sun	
12		Thanksgiving break		Peteres, Marentakis and McAdams	
13		Ethics of using spatialization systems	Conversation: How should we use immersive systems?	Kyriakakis	Quiz 3
14		<i>Creative applications: A Shot in the Dark</i>	<i>Conversation with Qianru Li</i>		
15					Final project: Creative work and paper