University Of California Berkeley
Sound and Music Computing with CNMAT Technologies
Fall 2020

Instructor: Andrew Blanton
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Office Hours: Directly after class on Mondays
Class Day/Time: W 9-11:50pm

Course Description

Music m158A explores the intersection of music and computers using a combination of scientific, technological, and artistic methods. Musical concerns within a computational frame are addressed through the acquisition of basic programming skills for the creation and control of digital sound.

Course Goals

Gain proficiency in Max/MSP programming environment. Learn basic concepts and techniques of computer- based music, composition, and performance. Included will be the exposure to the essentials of digital audio signal processing, musical acoustics and psychoacoustics, sound analysis and synthesis, software tools created by the Center for New Music and Audio Technologies (CNMAT), and use of Open Sound Control (OSC) and the language odot.

Begin to make your own art with these tools. Possibly begin to work towards advanced projects using these tools.

Required Texts/Readings

Textbook

Associated Max Patch

Course Web Materials

bcourses:
https://bcourses.berkeley.edu/courses/1497077

regular Zoom link:
https://berkeley.zoom.us/j/95920827283?pwd=WDBKMWVpYnZqZlBYTXk2dFdMVjdCUT09

CNMAT Everything:
https://berkeley.app.box.com/s/squzzgwhtkz4x1k3hd6emdn88h63vodb

Grading Information

Grading Policy:

Overview:
Graded assignments have the following weight:

- **30% Attendance + Participation** (*students are allowed one class absence without effect on this grade*). I take Zoom attendance.
- **30% Lab Assignments** (*spread over ~2 lab assignments*)
- **40% Final Project**

FINAL PROJECT PATCH and other documentation DUE ON EXAM DAY - TBA.

Labs

You are required to complete the lab assignments, which will be given out and are due on the dates shown above. Labs are due by the beginning of class on the due date posted (and not a minute later) on the class bCourses site.

Final grade distribution:

100% -- 90% A
89% -- 80% B
79% -- 70% C
69% -- 60% D
59% -- 0% F

Pluses are awarded for the top three percent and minuses are reserved for the bottom three percent of each grade distribution above, except in the case of A+'s. A's are given for grades from 94-100% and A+s are reserved only for exceptionally successful work, as determined at the professor's discretion.

Grading Criteria:

A 10: Excellence
The student fully commits to their project, both conceptually and technically. The final work created not only meets the criteria but it exceeds it. The student demonstrates a full understanding of the course content, and is able to apply that understanding in making original work with their own personal style.

B 8: Above Average
The student shows an understanding of the expected criteria for the assignment, and a sincere attempt to engage the conceptual framework. The quality of the project is good but not stellar. Technical understanding is demonstrated but has room for improvement.

C 7: Average
The student demonstrates a limited understanding of the conceptual framework of the assignment, and/or technical execution is underdeveloped with issues that could have been addressed in class or during office hours. The work would improve if more time and/or attention was dedicated to the project.

D 6: Below Average
The student only shows the slightest understanding of the intent of the assignment. There is a general failure to follow the intent and nuance of the assignment. The project can only be described as something that needs a great deal of work before it is considered something that is complete and meeting the requirements.

Please note: Except in cases of documented emergencies, incomplete grades are not given in this course.

Classroom Protocol

Group Agreements

We may discuss controversial issues, difficult subjects, and matters that are personally important to someone in the class. We will work together to craft group agreements (code of conduct) outlining our agreed-upon guidelines for creating a respectful class environment. It is expected that students will act in accordance with group agreements for the remainder of the semester.

Participation:

- Participation in class discussions, critique, and giving feedback to your peers on their work is **mandatory**.
- On Presentation days you must be able to explain and give a clear presentation of your work.
- Students are expected to participate in discussion and peer support in the class Discord server.

Online Class Protocol

All classes will meet via Zoom during the regular class hours. Students may ask questions in the Zoom chat or use the “hand raise” icon to get the professor’s attention. Students are asked to remain on mute while not speaking and should arrive punctually for the Zoom classes.

Notes on Zoom privacy:

Zoom Meeting Transcripts - Zoom allows participants to communicate with group messages to all of the meeting participants and/or to send private messages to individual participants. Although it seems reasonable that private messages stay between two people, please be aware that all of the group messages and all private messages will be included in the meeting transcript.

Zoom Meeting Attendance Report - Zoom provides a roster of people who attended the meeting along with the times they joined and left the meeting.

Other Policies

Attendance

Attendance is required during every class meeting time.

Late Work

If you are missing class due to a university function, please inform your instructor as soon as possible and provide the paperwork as early as you can so as to expedite our scheduling of individual appointments and make-up work.

Our policy expects regular attendance:

Late labs are penalized by a full letter grade (10% of assignment's total value) for each day

they are late. Final projects replace the final exam and therefore may not be late.

Academic Integrity
Copying all or part of another person's work, or using reference material not specifically allowed, are forms of cheating and will not be tolerated. Specifically: Any work submitted should be your own individual thoughts, and should not have been submitted for credit in another course unless you have prior written permission to re-use it in this course from this instructor. Do not collaborate or work with other students on assignments or projects unless you have been given permission or instruction to do so. If you are unclear about expectations, ask your instructor.

Accommodation
If you have been issued a letter of accommodation from the Disabled Students Program (DSP), please see me as soon as possible to work out the necessary arrangements. If you need an accommodation and have not yet seen a Disability Specialist at the DSP, please do so as soon as possible. If you would need any assistance in the event of an emergency evacuation of the building, the DSP recommends that you make a plan for this in advance. (Contact the DSP access specialist at 510-643-6456.)

Discussion
We welcome all pertinent discussion and are counting on your participation in the course. We ask that your rhetoric deals with statements and ideas rather than with speakers and persons. When working with your peers in class, let's emphasize constructive dialogue and avoid language that could be construed as a verbal attack.

COPYRIGHT INFORMATION

Federal copyright laws protect all original works of authorship fixed in a tangible medium. When using material that has been written, recorded, or designed by someone else, it is important to make sure that you are not violating copyright law by improperly using someone else's intellectual property.

The Department of Music is committed to upholding copyright law. As a student enrolled in this music class, you may be provided with access to copyrighted music which is directly related to the content of this course. It is our expectation that you will utilize these digital recordings during the course of the semester that you are enrolled in this class, and will delete these recordings after the close of the course. The purpose and character under which these recordings are being provided to you is for nonprofit educational purposes only.

To read more about UC's Policy and Guidelines on the Reproduction of Copyrighted Materials for Teaching and Research, visit http://copyright.universityofcalifornia.edu/index.html

Course Schedule

This syllabus is subject to change. The instructor will let you know when there are changes in the schedule.

Week	Date	Topics, Readings, Assignments, Deadlines	Assignments
1	Monday 8/31	Syllabus and Course Introduction - Student Introductions Slides - Intro to Max and Make sure everyone's environment is working	
2	Monday 9/7	**No Class (Labor Day)**	
3	Monday 9/14	Foundations to MSP - Time Automation	In Class Button Assignment Lab 1 Assigned
4	Monday 9/21	Foundations to MSP - Additive Synthesis	
5	Monday 9/28	Foundations to MSP - Subtractive Synthesis	Lab 1 Due
6	Monday 10/5	Introduction to O. -- controllers	Lab 2 Assigned
7	Monday 10/12	Modulation Synthesis Delay line Manipulation	

8	Monday 10/19	Modulation Synthesis Delay line Manipulation	Lab 2 Due
9	Monday 10/26	Sound Mass / Poly~	Lab 3 Assigned
10	Monday 11/2	Time - Tighter Synchrony - Audio Rate Sequencers	
11	Monday 11/9	Time - Rythem (Subdivisions / Polyrhythms)	
12	Monday 11/16	Granular Synthesis	Lab 3 Due
13	Monday 11/23	Generative Composition - O. Code	Final Project Proposal Due
14	Monday 11/30	Generative Composition - O. Code	Final Project Presentations
15	Monday 12/7	Reading/Review/Recitation Week	
16	Monday 12/14		Final Project/Code Due