Composition of Electroacoustic Music (MUC 4401 & 6444)

University of Florida Spring 2022

Dr. Scott Lee - scott.lee@ufl.edu

M/W/F 8:30 -9:20 PM, MUB 147

Office: MUB 339   Office Hours: TBA

How to get in touch with me:

For short questions: E-mail is best. E-mails will generally be answered within 24 hours of receipt, except on weekends.

For everything else: Come to office hours or make an appointment. Office hours are a chance for you to get help on assignments, go over material covered in class, talk about connections between class material and other ideas, and so on. I strongly encourage you to take advantage of this time.

Course Description and Goals:

An introduction to computer music using the visual programming environment Max (formerly Max/MSP), through tutorials, guided exercises, in-class instruction, assignments, and two composition projects. Students will gain proficiency in a number of topics, including MIDI sequencing, generative and algorithmic composition, digital signal processing, synthesis, and interactive computer performance. Students will also discover repertoire through the creation of a listening list over the course of the semester.

Required Course Materials

A licensed copy of Max 8 on personal computer. Available at https://cycling74.com

Begin with the 30 day trial, then either purchase a $250 permanent academic license (recommended, comes with $99 upgrades to future versions) or the $59 annual academic subscription. Academic pricing details here.

Optional Additional Resources:

Cipriani, Alessandro and Maurizio Giri. *Electronic Music and Sound Design: Theory and Practice with Max 7 – Volume 1 (4th Edition)*. Rome: Contemponet, 2019.

Roads, Curtis. *The Computer Music Tutorial*. Cambridge: MIT Press, 1996. (UF Library: MT56 .R6 1996)

Other Course Materials

Access to a digital audio workstation (Reaper, Logic Pro, Pro Tools, Ableton, etc.)
Headphones
USB Flash Drive

Digital Resources

We will make use of Canvas for communication and assignments https://ufl.instructure.com/
Please check it frequently.

Attendance

Students are expected to attend all regularly scheduled classes. Each unexcused absence over three will result in a one-point deduction from your final grade. Any student with eight or more unexcused absences will fail the course. An excused absence is an approved UF event, a family emergency, or an

illness. If more than two absences result from an extended illness, a doctor's note will need to be provided for those absences to be excused.

Students knowing in advance that they will miss a class must be in contact **beforehand via email**. Please do not schedule non-urgent doctor's appointments during class time. In the case of an absence (excused or unexcused), that student is responsible for determining what material was covered, and what assignments were given.

Tardy Policy
Attendance will be taken at the beginning of class. Students who are not present when I take attendance will be marked as tardy. Three tardies will count as one unexcused absence. There are no excused tardies.

Evaluation:
Students will be evaluated by participation & preparation, a listening list, and assignments. Some assignments will be larger in scope, consisting of multiple parts, with each part counting as a single assignment.

Participation & Preparation:	10%
Listening List:	5%
Assignments:	85%

Scale:
A = 93-100 / A- = 90-92 / B+ = 87-89 / B = 83-86 / B- = 80-82 / C+ = 77-79 / C = 73-76 C- = 70-72 / D+ = 67-69 / D = 66-65 / D- = 63-64 / E = 0-62

Homework Policy:
You are expected to complete assigned tutorials (see class schedule below) before the class periods for which they are assigned. Assignments will be given either in class or via Canvas and should be completed on time. Students must come to class prepared to present and discuss assignments in class. If you are unable to fully participate in class because you failed to complete the assignments or tutorials for a given day, your grade in the class will be adjusted accordingly.

Late Assignment Policy:
Late assignment submissions (not including late submissions due to excused absences) will be accepted with a grade deduction of 5% if submitted within 24 hours of the due date, and a 2.5% further reduction for each additional day the assignment is late. Grade deductions for late submission are capped at 50%.

To avoid grade deductions for late submission, students may request due-date extensions for assignments via email at least 24 hours in advance of the original due date. Extensions will be assessed on a case-by-case basis.

Listening List:
Over the course of the semester, students will create an annotated listening list of 10 pieces, performances, installations, interactive performance patches, etc. that use Max or live/interactive electronics. The pieces should be of personal interest to the students, and students will submit their list and present their favorites to the class.

UF Student Honor Code

You are required to abide by the Student Honor Code. Any violation of the academic integrity expected of you will result in a minimum academic sanction of a failing grade on the assignment or assessment. Any alleged violations of the Student Honor Code will result in a referral to Student Conduct and Conflict Resolution. Please review the Student Honor Code and Student Conduct Code at http://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/

Technology Policy:

Your attention is your most valuable asset; use it to the best of your ability. I reserve the right to dock your grade and/or ask you to leave class if you are inappropriately using technology in class.

Students Requesting Accommodations due to Disabilities

Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation. To request classroom accommodations, contact the Assistant Dean of Students/Director of the Disability Resources Program at P202 Peabody Hall or call 392-1261 (V), 392-3008 (TDD).

Evaluations

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance is available at https://gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at https://gatorevals.aa.ufl.edu/public-results/.

Max Resources:

Cycling '74: https://cycling74.com

Max Objects Database: http://www.maxobjects.com/

Software Max and MSP Patch Libraries:

http://www.chikachikabowbow.com/Music/Computers/Software/Max_and_MSP/Patch_Libraries/

Real Time Composition Library: http://www.essl.at/works/rtc.html

Course Units

  I. Max Basics
 II. MIDI & Generative Composition
III. Digital Signal Processing

Schedule below (subject to change)

Week	Class	Date	Day	Unit	Topic	Tutorials	Assignments
1	1	1/9	Mon	Max Basics	Intro: Course Overview, Navigating Max, Help Files, Resources		Listening List Assigned
	2	1/11	Wed		Intro to Max Programming: Objects, Messages, Patching, and Printing	Tutorials 1-2	Quotation Printer Assigned
	3	1/13	Fri		Data Types: Numbers, Lists, and Math, Basic Scaling	Tutorials 3 & 6	Quotation Printer Due
2	4	1/18	Wed		Order of Operations, Hot and Cold Inlets, Inspector, Metro & Toggle	Tutorials 4-5	Geometry Calculations Assigned
	5	1/20	Fri		Numerical User Interfaces, Keyboard and Mouse Input, Gates/Switches	Tutorials 7-9	Geo. Calc. Due, Drum Machine Assigned
3	6	1/23	Mon		Lab: Drum Machine		
	7	1/25	Wed	MIDI &	Intro to MIDI & MIDI Controllers	MIDI 1-3	Drum Machine Due
	8	1/27	Fri	Generative Composition	Random Generators	Tutorials 10-11	Generative MIDI pt. 1 Assigned
4	9	1/30	Mon		Lab: Generative MIDI pt. 1		
	10	2/1	Wed		Generative Art		
	11	2/3	Fri		Time in Max/Logic Functions	Tutorial 19	Generative MIDI pt. 1 Due Gen. MIDI pt. 2 Assigned
5	12	2/6	Mon		Lab: Generative MIDI pt. 2		
	13	2/8	Wed		List Processing and Sorting	Data Tutorials 1 & 5	Generative MIDI pt. 2 Due Step Sequencer Assigned
	14	2/10	Fri		Probability	Tutorial 17	
6	15	2/13	Mon		Lab: Step Sequencer		
	16	2/15	Wed		Routing and Data Storage	Tut. 18 & Data Tut. 2	Step Sequencer Due Midterm Assignment Assigned
	17	2/17	Fri		Routing and Data Storage continued	Tutorials 16 & 20	
7	18	2/20	Mon		Lab: Midterm		
	19	2/22	Wed		Midterm Presentations		Midterm Assignment Due
	20	2/24	Fri		Midterm Presentations		

8	21	2/27	Mon	Digital Signal Processing	Intro to MSP - Digital Audio and Signal Processing	MSP Basic Tutorials 1-2	
	22	3/1	Wed		Intro to MSP Continued	MSP Basic Tut. 3-4	
	23	3/3	Fri		Listening List Presentations		Listening List Due
9	24	3/6	Mon		Lab: MSP Basics		
	25	3/8	Wed		Samplers	Sampling Tut. 1-3, 6	
	26	3/10	Fri		Delays	Delay Tutorials 1-3	Delay/Looping Environment Assigned
10	27	3/20	Mon		Lab: Delay/Looping Environment		
	28	3/22	Wed		Filters	Filter Tutorials 1-2	Delay/Looping Environment Due
	29	3/24	Fri		Filters	Filter Tutorials 3-5	Synth pt. 1 Assigned
11	30	3/27	Mon		Lab: Synthesizer pt. 1		
	31	3/29	Wed		Additive and Modulation Synthesis	Synthesis Tut. 1-3	Synth pt. 1 Due
	32	3/31	Fri		Modulation Synthesis Continued	Synthesis Tut. 4-5	Synth pt. 2 Assigned
12	33	4/3	Mon		Lab: Synthesizer pt. 2		
	34	4/5	Wed		MIDI and MSP	MIDI and MSP 1-3	Synth pt. 2 Due
	35	4/7	Fri		Interactivity and Abstractions	Tutorial 15	Synth pt. 3 Assigned
13	36	4/10	Mon		Lab: Synthesizer pt. 3		
	37	4/12	Wed		Polyphony and Granular Synthesis	Polyphony Tut. 1-2	Synth pt. 3 Due
	38	4/14	Fri		3rd Party Plugins & Max for Live Objects	MSP Plugin Tut. 1-3	Synth pt. 4 Assigned
14	39	4/17	Mon		Lab: Synthesizer pt. 4		
	40	4/19	Wed		Multi-Channel Audio		
	41	4/21	Fri		Advanced Patch Architecture and Organization	Pattr Tutorials 1-2	
15	42	4/24	Mon		Synthesizer Presentations		Synth pt. 4 Due
	43	4/26	Wed		Synthesizer Presentations		