

MUCP 4670 — Introduction to Electroacoustic Music

Instructor: Dan Tramte
Email: DanielTramte@my.unt.edu
Meeting time: MWF 3:00-3:50 PM (MF 3:00-3:50 PM for Graduates)
Place: Room 252 (General Access/Piano lab)
Office Hour: By appointment.

Course Website: <http://www.dantramte.com/intro-2-ea-music.html> BOOKMARK THIS LINK!
You will visit this page frequently throughout the semester... or go to www.dantramte.com, roll your mouse over the 'HOME' button and click 'Intro-2-ea-music' Password: eamusique

Text (get at least one)

Hoskin, Dan. *An Introduction to Music Technology*. New York & London: Routledge, 2011.
Roads, Curtis. *The Computer Music Tutorial*. Cambridge, Massachusetts: MIT Press, 1994.

Objectives

Students enrolled in Introduction to Electroacoustic Music will learn the basic principles of electroacoustic music through studying the history of electroacoustic music, basic acoustics, principles of both analog and digital audio, and basic MIDI. The course will survey current software for recording audio, manipulating audio, mixing audio signals, and sequencing both MIDI and audio data. Students will demonstrate their understanding of the course materials through their performance in projects, blogs, and through the practical application of the techniques in the composition of a midterm and final project.

Primary Software: Logic Pro & Max 6

Attendance

Attendance is expected and factors into the class participation component of the grade. In addition, should a student have more than three unexcused absences they will be docked a full letter grade.

Cell phone/computer policy

Please turn off all cell phones before class begins. Use of cell phones is *strictly* prohibited during lectures. Violators will have their phones confiscated for the remainder of the class period. Laptops are only allowed for class related purposes (taking notes, using audio processing software, etc...) If you are caught on social networks or other inappropriate websites, your laptop will be, again, confiscated for the remainder of the class period.

Student Behavior in the Classroom

Student behavior that interferes with an instructor's ability to conduct a class or other students' opportunity to learn is unacceptable and disruptive and will not be tolerated in any instructional forum at UNT. Students engaging in unacceptable behavior will be directed to leave the classroom and the instructor may refer the student to the Center for Student Rights and Responsibilities to consider whether the student's conduct violated the Code of Student Conduct. The university's expectations for student conduct apply to all instructional forums, including university and electronic classroom, labs, discussion groups, field trips, etc. The Code of Student Conduct can be found at <http://conduct.unt.edu/>

Student Evaluation of Teaching Effectiveness

The Student Evaluation of Teaching Effectiveness (SETE) is a requirement for all organized classes at UNT. This short survey will be made available to students at the end of the semester, providing a chance to evaluate this course; further instructions will be provided at that time. You are strongly encouraged to complete this online survey prior to the end of the semester.

Office of Disability Accommodation

The University of North Texas makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide you with an accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request accommodations at any time, however, ODA notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information see the Office of Disability Accommodation website at <http://www.unt.edu/oda>. You may also contact them by phone at 940.565.4323.

Financial Aid Satisfactory Academic Progress (Undergraduates)

A student must maintain Satisfactory Academic Progress (SAP) to continue to receive financial aid. Students must maintain a minimum 2.0 cumulative GPA in addition to successfully completing a required number of credit hours based on total registered hours per term. Students cannot exceed attempted credit hours above 150% of their required degree plan. If a student does not maintain the required standards, the student may lose their financial aid eligibility.

If at any point you consider dropping this or any other course, please be advised that the decision to do so may have the potential to affect your current and future financial aid eligibility. Please visit <http://financialaid.unt.edu/satisfactory-academic-progress-requirements> for more information about financial aid Satisfactory Academic Progress. It may be wise for you to schedule a meeting with an academic advisor in your college or visit the Student Financial Aid and Scholarships office to discuss dropping a course being doing so.

Financial Aid Satisfactory Academic Progress (Graduates)

A student must maintain Satisfactory Academic Progress (SAP) to continue to receive financial aid. Students must maintain a minimum 3.0 cumulative GPA in addition to successfully completing a required number of credit hours based on total registered hours per term. Students cannot exceed maximum time frames established based on the published length of the graduate program. If a student does not maintain the required standards, the student may lose their financial aid eligibility.

If at any point you consider dropping this or any other course, please be advised that the decision to do so may have the potential to affect your current and future financial aid eligibility. Please visit <http://financialaid.unt.edu/satisfactory-academic-progress-requirements> for more information about financial aid Satisfactory Academic Progress. It may be wise for you to schedule a meeting with an academic advisor in your college or visit the Student Financial Aid and Scholarships office to discuss dropping a course being doing so.

Academic Integrity

Academic Integrity is defined in the UNT Policy on Student Standards for Academic Integrity. Any suspected case of Academic Dishonesty will be handled in accordance with the University Policy and procedures. Possible academic penalties range from a verbal or written admonition to a grade of "F" in the course. Further sanctions may apply to incidents involving major violations. You will find the policy and procedures at: <http://vpaa.unt.edu/academic-integrity.htm>.

:::BLOGS::: 20% of your final grade

In order to familiarize yourself with the repertory and aesthetic of electroacoustic music, you are required to participate in listening blogs. These blogs are available at the listening center: <http://www.dantramte.com/listening-center.html> (Password = eamusique)

Each link is directed to a blog. You must go to each blog, listen, and follow along with the scores (if applicable), and **write a ≥ 225 word response** to the prompt. Do not simply give your reaction or provide a play-by-play synopsis of the work. Your goal is to engage with the work critically in order to come to some understanding of the musical choices of the composer and the technological possibilities and limitations of the medium. Specifically, your main objective is to find two or three intelligent things to say. You may comment on a technical device used by the composer, an aesthetic approach, a critique on the form, or even the types of sounds used. (Often, it will require much more than 225 words to say something intelligent.)

Your response may be a 'reply' to a previous comment, but make sure that this is not a reactive/counterattack response. Heated debates are disallowed.

These blogs are password protected, so they are ONLY visible to your fellow class members. If you would rather blog anonymously, you can make up a code name (instead of filling out your actual name when you comment) and email it to me so that I can associate you with the code name. Understand that it will be difficult to remain 100% anonymous in a small classroom, especially if you're the only one anonymizing your name.

All blogs are DUE on the first class period of the following week (typically Monday). Realize that your comments are time-stamped, so I will be able to determine whether or not you turned them in on time.

:::Midterm Project::: 25% for Undergraduates | 30% for Graduates

Undergraduates:

Compose a 1-1.5 minute fixed media work that will be played and discussed in class. This excerpt must demonstrate your incorporation of audio sequencing, audio processing, and audio mixing techniques. You may use MIDI, but only as a sequencing tool that controls soundfiles (a sampler), or synthesized sounds (synthesizer). You may not use stock MIDI sounds as the final aural product. Please audition many additional sounds so that you have numerous options and combinations of sounds to choose from in order to create a cohesive piece with enough sonic variation to maintain the attention span of listeners.

You will also need to turn in your raw sounds.

Finally, demonstrate your ability to communicate these sounds visually by creating a graphic

score. The score should capture as many gestures, dynamics, and other parameters of the piece and its constituent sounds as possible.

Graduates:

Compose a 3-3.5 minute fixed media work that will be played and discussed in class. This excerpt must demonstrate your incorporation of audio sequencing, audio processing, and audio mixing techniques. You may use MIDI, but only as a sequencing tool that controls soundfiles (a sampler), or synthesized sounds (synthesizer). You may not use stock MIDI sounds as the final aural product. Please audition many additional sounds so that you have numerous options and combinations of sounds to choose from in order to create a cohesive piece with enough sonic variation to maintain the attention span of listeners.

:::MaxMSP Project/Presentation::: 15% of final grade (Undergraduates only)

Each student will be assigned a handful of Max objects *OR* MSP objects *depending on when you choose to present; early presenters will be assigned MSP objects, while late presenters will be assigned Max objects*. Once these are assigned, you will study and learn about these objects through help files, max tutorials, and online sources (<http://cycling74.com/>, <http://maxobjects.com/>, youtube tutorials, etc...).

In the case that you are assigned MSP objects, you will turn in a zipped folder containing a max patch that utilizes all or most of the assigned max objects. In this patch, you will create a simple interactive and/or algorithmic environment. Please use dac~ as your sonic output. **REMEMBER TO INCLUDE ALL SOUNDFILES AND/OR EXTERNAL OBJECTS IN YOUR FOLDER!**

In the case that you are assigned Max objects, you will turn in a max patch that utilizes all or most of the assigned max objects. In this patch, you will create a simple interactive and/or algorithmic environment. Please use MIDI as your sonic output (makenote—>noteout).

All students will turn in a 2-3 page paper (double-spaced, 1" margins) containing short descriptions of the assigned objects, their input controls and output product, as well as a couple paragraphs about your patch. You should include links to any of the online sources you used to learn about the object.

Finally, each student will do a 15-18 minute presentation on their projects. Please make sure to leave enough time at the end to execute/perform your patch. Presentations that go over 12 minutes long will result in a 5% deduction for every 5-minute mark that the presentation exceeds past 12 minutes. Therefore, it would be wise to practice the timing/pace of the presentation before hand.

MaxMSP projects will be due on the date of your presentation.

:::Final Project::: 30% of your final grade (Undergraduates)

Compose a 3-5 minute interactive piece for instrument. This piece will demonstrate your abilities in digital processing techniques, and coding logic/style. In choosing this project, you must have a rationale behind the use of MaxMSP. Ask yourself, "Can I realize this piece using only fixed media?" If you find yourself answering 'yes' to this question, you should reconsider your use of MaxMSP as the executing software, or find a new musical concept that requires MaxMSP. Your project must have a sensible and intuitive graphical user interface so that your performer(s) are comfortable using your software and it is easy to disseminate.

OR

Compose a 3-5 minute piece for instrument and fixed media. Like the midterm project, you will create a fixed EA piece; however, include an acoustic instrumental (or voice) part that is performed along with the media. Please create a legible score for the performer using your graphic-score skills to represent the sounds in the fixed electroacoustics.

OR

Create a multifunctional toolbox in MaxMSP. Design the toolbox so that it is flexible enough to appropriate it for future interactive/algorithmic compositions. It may be digital mixer effects box, or a score-following system, or anything else that could provide you with multiple/repeated uses.

:::Final Performance Project/Presentation::: 40% of final grade (Graduates only)

Perform a piece (or 8-ish minutes of a longer piece) for live electronics. This performance should be treated as a miniature lecture recital. Thus, it should be supplemented with a 10-15 minute presentation discussing the composer's use in electronics.

:::GRADE BREAKDOWN:::

Undergrad/Composers Grade Breakdown:

Class Participation/Attendance	10%
Blogs	20%
Fixed Media Composition w/ graphic score	25%
Max Project/Presentation	15%
Final Project	30%

Graduate/Performers Grade Breakdown:

Class Participation/Attendance	10%
Blogs	20%
Fixed Media Composition	30%
Final Performance Project/Presentation	40%

:::SCHEDULE::: (subject to change)

Weekly Structure: Monday-lecture | Wednesday-tech | Friday-lab

August

Week 1a

~Listening: Alvin Lucier's *I'm Sitting in a Room*

W, Aug. 28) Intro to intro to electroacoustic music | TF in Europe | Physics

F, Aug. 30) Physics continued

September

Week 1b

~Listening: Luc Ferrari's *Presque rien No. 1*

M, Sept. 2) NO SCHOOL (Labor Day)

W, Sept. 4) Physics | Microphones

F, Sept. 6) Microphones continued

Week 2

~Listening: Dan Tramte's *euthanasia* and Jon Nelson's *object sonore/objet cinétique*

M, Sept. 9) Digital Audio — to computer and back again

W, Sept. 11) Gear (Discuss Midterm Project)

F, Sept. 13) Audacity

Week 3

~Listening: Iannis Xenakis's *Mycenae Alpha* and Michel Chion's *Dies Irae*

M, Sept. 16) MIDI

W, Sept. 18) Sound Representation

F, Sept. 20) DAW (Logic Pro)

Week 4

~Listening: Natasha Barrett's *Animalcules* and Iancu Dumitrescu's *Temps Condenses*

M, Sept. 23) History — Instruments

W, Sept. 25) Delay-based FX

F, Sept. 27) Logic Pro

Week 5

~Listening: Morton Subotnick's *Silver Apples of the Moon* and György Ligeti's *Artikulation*

M, Sept. 30) History People (Smalley)

October

W, Oct. 2) Spectral Analysis

F, Oct. 4) Plugins

Week 6

~Listening: Karlheinz Stockhausen's *Gesang der Junglinge* and Lasal's *Hexagrama*

M, Oct. 7) History: Aesthetics | Listen to projects
DUE: Midterm Project

W, Oct. 9) Granular Synthesis (Truax) | Listen to projects

F, Oct. 11) SoundHack | Listen to projects

Week 7

~Listening: David Bithell's *The Eye (Unblinking)* and Ali Momeni's *Truce*

M, Oct. 14) MaxMSP (Discuss MaxMSP Project)

W, Oct. 16) Space

M, Oct. 18) Coding Space

Week 8

~Listening: Alexander Schubert's *Laplace Tiger* and Panayiotis Kokoras's *Jet*

M, Oct. 21) MaxMSP — Learn some MSP objects

W, Oct. 23) Build a Synthesizer

F, Oct. 25) MaxLAB

Week 9

~Listening: Simon Steen-Andersen's *Chambered Music* and Kaija Saariaho's *Lonh*

M, Oct. 28) MaxMSP — Coding Problems?

W, Oct. 30) Building that synth

November

F, Nov. 1) MaxLAB

Week 10

~Listening: Hans Tutschku's *Zellen-Linien* and Ted Coffey's *Blue Cycle: Noise*

M, Nov. 4) Max 4 Monkeys

W, Nov. 6) Learn some Max objects

F, Nov. 8) MaxLAB

Week 11

~Listening: Andrew May's *Twittering Machine* and Corte Lippe's *Music for Snare Drum and Computer*

M, Nov. 11) le GUI

W, Nov. 13) more objects

F, Nov. 15) MaxLAB

Week 12

~Listening: Elaine Lillios's *Among Fireflies* and Ben Carey's *_derivations*

M, Nov. 18) Make a signal router

W, Nov. 20) more objects

F, Nov. 22) MaxLAB

Week 13

~Listening: John Gibson's *Wind Farm* and SLOrK & PLOrK

M, Nov. 25) Drum Machine / Sequencer

W, Nov. 27) more objects

F, Nov. 29) NO SCHOOL (Thanksgiving)

December

Week 14

~Listening:

M, Dec. 2) Individual Meetings

W, Dec. 4) Individual Meetings

F, Dec. 6) Reading Day

FINALS WEEK: Friday, Dec. 13 at 1:30-3:30 — Grad 'lecture recitals' and Undergrad Final Projects in MEIT