

Music 009: *Music and Technology 2A*

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This class explores the interdisciplinary nature of sound and music outside of conventional performance spaces. The course will introduce concepts and technologies relating to mixed media, such as site-adaptive sound art, sound installations using GPS and smartphones, performance art, intervention, and sound ecology. Emphasis will be placed on thinking about music in new ways, and students will be expected to participate in the design, fabrication, and installation of their final projects as part of their course requirement.

Dist: TAS: S. Topel

FAULKNER (music department)

Learning Outcomes: At the end of this course you will be able to:

1. Use a laptop as a musical instrument.
2. Acquire basic music and digital audio fundamentals.
3. Program / produce music using AbletonLive, Audacity, and Auxiliary Audio Software.
4. Understand concepts pertaining to playlist organization, DJ'ing, and curation.
5. Perform original electronic music works as an ensemble.

Assessment

1. Class Participation	10%
2. Foundations and fundamentals quiz week 2	10%
3. 6 x weekly lab assignments @ 5% each	30%
4. 2 x music production assignments	20%
5. Laptop ensemble piece and performance (group)	30%

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Required Texts IMPORTANT

Ableton LIVE Intro is the de facto textbook for this course. It is critical that you get this software installed, purchased, and operating properly within the first week of class since the majority of labs, production, and performance will happen using this program. That said, this course is **not** about LIVE, but about sound design! You will be responsible for learning to master the tools within this program as it relates to musical problems and questions. If you require additional help with this program beyond what can be provided by T.A.'s, office hours, or online tutorials, then you should consider carefully whether this course is appropriate for you or not. Finally, the X-Hours are mandatory as the first few weeks we will cover concepts in the production/performance using this and other software.

Attendance

As mentioned above, 10% of your grade will comprise attendance and participation. **Please note:** more than *three* absences from class or *one* absence from a design critique day, (see below,) will result in a zero! Since this class involves performance practice, it is vitally important that you are present and engaged with the tasks and materials.

Laptop Policy

There will be both appropriate and inappropriate times when you should be using your laptop. Certain sections of lectures and discussions may require all or some laptops to be closed, i.e. not in use.

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Statement on Physically and Learning Disabled Students

Students with disabilities enrolled in this course who may need disability-related classroom accommodations are encouraged to make an appointment to see me before the second week of the term. All discussions will remain confidential, although the Student Accessibility Services office may be consulted to discuss appropriate implementation of an accommodation requested.

Student Religious Observances

Some students may wish to take part in religious observances that occur during this academic term. If you have a religious observance that conflicts with your participation in the course, please meet with me before the end of the second week of the term to discuss appropriate accommodations.

Office Hours

Office hours are **TBA**, according to student's schedules. I strongly recommend setting an appointment on Google calendar, (link on Blackboard and in email,) in advance, because I may or may not be in my office otherwise. This method guarantees that we will see each other. My office is on the first floor of Hallgarten Hall. Hallgarten is between New Hampshire and Topliff dorms. Please ring the doorbell when as it remains locked at all times.

Honor Principle

It is generally assumed that you adhere to Dartmouth College's *Academic Honor* policy outlined in the ORC. This means that you must acknowledge sources---in any format---whether it be audio samples, written text, etc. Furthermore, given the collaborative nature of an ensemble, you may be asked at the end of the course to provide a statement of contribution to the final collaborative project, which may impact your final grade. Failure to accurately report your sources and contributions may result in serious academic action by the Associate Dean of Students.

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week 1. 09/11 Fundamentals 1		Assignments/Labs
<ul style="list-style-type: none"> TUE: Your laptop as a musical instrument: i/o, primary modes of interaction/enaction, live sound processing, soundfiles, basic formats. <i>No X-Hour</i> THU: sampling, fidelity, context, digital vs. analog, audio signal basics 		Reading: Miller Puckette: “Theory and Techniques of Electronic Music” Sinusoids, amplitude, and frequency Thurs: Lab 1 OUT
week 2 . 09/18 Fundamentals 2		
<ul style="list-style-type: none"> TUE: fundamental synthesis methods and filtering in live contexts. WED: Lab: <i>Controlling Synthesis, resynthesis, and processing in LIVE.</i> THU: QUIZ FUNDAMENTALS. Lecture: aspects of pitch and rhythm, and related organization methods. 		Wed: Lab 1 DUE Lab 2 OUT Puckette: Classical Waveforms, Filters: Taxonomy of Filters
week 3. 09/25 Music Design 1		
<ul style="list-style-type: none"> TUE: QUIZ FUNDAMENTALS. Lecture: aspects of pitch and rhythm, and related organization methods. WED: Lab: Extended synthesis techniques, side-chaining, FM synthesis, and other techniques. THU: Lecture: aspects of pitch and rhythm, and related organization methods (cont.) Motive, harmonic structure, automata and texture. 		Wed: Lab 2 DUE Lab 3 OUT
week 4. 10/02 Music Design 2		
<ul style="list-style-type: none"> TUE: The laptop as an ensemble: Pieces in review. Rhythm: designing beats, using MIDI vs. Audio, drum machines. WED: Lab: <i>Ableton: Impulse: working with beats, tempo, grooves, and loops.</i> THU: Birth of the Remix: Designing Your Experience. 		Wed: Lab 3 DUE Lab 4 OUT
week 5. 10/09 Music Design 3		
<ul style="list-style-type: none"> TUE: GUEST LECTURE Musical form, song forms, phrase structure, beginnings and endings. WED: Lab: <i>Ableton: Manipulation of Clips, scenes, cues, etc.</i> 		Wed: Lab 4 DUE Lab 5 OUT Tue: ASSIGNMENT 1: OUT: <i>Building blocks: defining your</i>

- THU: **GUEST LECTURE** Copyright and the (il)legality of Remixing.

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week 6. 10/16 Music Production 1			Assignments/Labs
<ul style="list-style-type: none"> TUE: The Anatomy of a musical space: Foreground, Middleground, and Background. WED: Lab: <i>Macro-control of your mix: Production basics.</i> THU: Acoustic Ecology: A Musical Work as an Environment. 			WED: Lab 5 DUE Lab 6 OUT
week 7. 10/23 Music Production 2			
<ul style="list-style-type: none"> TUE: Laptop orchestras background, SLORK, PLORK, assignment of laptop ensemble groups. WED: <i>Employing Ableton LIVE for laptop ensembles. Hardware setup.</i> THU: Improvisation and performance strategies: Paula Matthusen's <i>Lathyrus</i> and other works. 			Tue: ASSIGNMENT 1: DUE Tue: ASSIGNMENT 2: OUT: Using <i>Ableton Live</i> for group music performance WED: Lab 6 DUE Lab 7 OUT
week 8. 10/30 Laptop Ensembles 1			
<ul style="list-style-type: none"> TUE: Laptop ensemble continued: roles and interactions. WED: <i>Using Ableton LIVE for laptop ensembles. Performance Strategies.</i> THU: Materials, form, and structure. Project updates 			WED: Lab 7 DUE Laptop ensemble development and rehearsals
week 9. 11/06 Laptop Ensembles 2			
<ul style="list-style-type: none"> TUE: Project updates: Description/play-through of works in progress. NO X-HOUR <ul style="list-style-type: none"> THU: In-class group laptop ensemble show and tell. Evaluation of technology, sound quality, performance clarity, and musical ideas. 			Laptop ensemble development and rehearsals
10. 11/13 Laptop Ensemble Performance			
<ul style="list-style-type: none"> TUE: Student performances of Laptop Ensembles photo and video documentation 			ASSIGNMENT 2: Project write-ups with contributions and FINAL Laptop Ensemble performances