

Music 28: Sonic Space and Form

Description

An exploration of mixing, shaping, and controlling musical sound, textures, and form in recorded, electronic, and live music contexts. Through weekly listening, production, and composition exercises, students will learn to read, understand, and manipulate mixes, filter and spatialization effects, and more advanced audio processing techniques. Topics to be covered include control over timbre, range, spaciousness, and musical structure, through filtering, mixing, spatialization, imaging, and other key aspects of recording and production technologies.

Prereq.: Music 25 or permission of the instructor. X-Hour: Tonmeister Lab.

Offered: 15F, 17S; 3A or 3B

Learning Outcomes

By the end of this course students will be able to:

1. master mixing, production, and aspects of orchestration.
2. arrange, sequence, and transcribe music for any number of sources.
3. understand, conceptually, sonic forms and how to de-construct and critically appraise mixes of art and popular music.

Assessment

<input type="checkbox"/>	Tonmeister Lab	25%
<input type="checkbox"/>	Participation in class, weekly reading/listening, lab exercises.	15%
<input type="checkbox"/>	Assignment 1 (2-3 Sources)	20%
<input type="checkbox"/>	Assignment 2 (4-6 Sources)	20%
<input type="checkbox"/>	Assignment 3 (7+ Sources)	20%

Texts and Materials

Required:

Corey, J. *Audio Production and Critical Listening: Technical ear Training* (1st Edition)

Supplemental Reading Set 27.1 - 27.5:

A compilation of articles, chapters, and unpublished texts supplied by the instructor.

Required Software

Logic Pro X is the required software 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. 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.

Tonmeister Lab

Grades for the work in this course A significant portion of Music 25-28 will be devoted to building fundamental aural skills specific to production and sonic arts. The ability to recognize, identify, notate, replicate, and evaluate what you experience is critical as you grow as a musician.

To develop these skills you will be required to do two things regularly:

1. Attend and actively participate in the weekly *Tonmeister* lab (x-hour, Monday 5:00-5:50pm in Hartman)
2. Devote one hour of practice a week to aural drilling using the listening component of *Audio Production and Critical Listening: Technical ear Training*.

All music majors and all students enrolled in Sonic Arts courses have access to this software. Faculty will review both the time you are spending and the progress you are making using and may recommend ways to improve your performance.

Your work and progress both within the weekly lab and from using *Audio Production and Critical Listening: Technical ear Training*. will constitute **25%** of your grade in **Music 25-28**. The remainder of your grade will be determined by your performance on the various assignments and on your attendance and participation.

Attendance

As mentioned above, 15% 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.

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

M.W.F. Replace this information with relevant times and contact information per Instructor availabilities.

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.

Syllabus

week 1.	Exercises/Listening	Readings/Assignments
<p>Shaping Sounds in music, recording, and production. Spectral balance, form, and timbre.</p> <p>The production chain and general aspects of context in mixing and mastering, the production chain,</p>	<p>Charpentier, M.A. <i>Messe de Minuit pour Noël</i></p> <p>Eno, B. <i>Music for Airports</i></p> <p><i>Filter / E.Q. identification.</i></p>	<p><i>Audio Production and Critical Listening: 1.2, 2.1, 2.2</i></p> <p>Supplemental Reading 27. 1</p>
week 2 .		
<p>2-3 Source mixing and production, timbral separation, masking, and analysis of perceived spatial attributes, basic audio imaging in stereo configuration.</p> <p>Auditory Scene Analysis (ASA), extended listening, auditory illusions, phase interference, and other music psychoacoustic concepts.</p>	<p>Anon: <i>In Seculum Viellatoris, Bamberg Manuscript (Codex) c. 1300.</i></p> <p>Amacher, M. <i>Synaptic Island</i></p> <p>Dirty Projectors, "Bitte Orca"</p> <p><i>POGO: Wishery.</i></p> <p><i>Stereo and Multi-Channel Imaging.</i></p>	<p><i>Audio Production and Critical Listening: 3.1, 3.2, 3.7</i></p> <p>Supplemental Reading 27. 2</p> <p>ASSIGNMENT 1: 2-3 Sources</p>
week 3.		
<p>Compression and other dynamic range controls in recording, recorded music, live sound reinforcement, and album curation.</p> <p>Reverberation models and their applications in sound design, reinforcement, mixing, and timbre manipulation. Mid-Side processing.</p>	<p>Vivaldi, A. <i>Vivaldi Concerti Tafelmusic</i>, Sony Classical.</p> <p>Murray, M. <i>Complete Recordings</i>, St. John Divine. Telac Digital.</p> <p>Zedd, Steve Angello, Swedish House Mafia.</p>	<p><i>Audio Production and Critical Listening: Ch. 4</i></p> <p>Assignment 1 DUE</p>
week 4.		

Mistake or Virtue? distortion, noise, glitch, digital vs. analog noise, information noise, randomness.	Beethoven, L.V. <i>Écossaise for Winds</i> in D Major.	<i>Audio Production and Critical Listening: Ch. 5</i>
Audio RX, noise removal, artifacts, information compression, format transfer, and remastering.	Subochev, D. <i>Hex</i> . EMD: Skrillex, Congarock, and Aphex Twin. Glitch Mob, <i>Drink the Sea</i> . Beatles <i>Soldier of Love (remastered)</i>	Supplemental Reading 27. 3

week 5.	Exercises/Listening	Readings/Assignments
Live sound reinforcement and recording, improvised mixing, microphone selection and placement. Recording session basics, multi-track recording, planning techniques, and post-production in live recording settings.		Supplemental Reading 27. 4 ASSIGNMENT 2: 4-6 Sources
week 6.		
Analysis of Sound Part I: Overall Bandwidth, Spectral Balancing, auditory Image. Effects and analysis chains in audio analysis for mix and production.	Listening/Analysis: Stravinsky, I. <i>Rite of Spring</i> , L.A. Philharmonic, Salonen, E.P. Sheryl Crow, Peter Gabriel,	<i>Audio Production and Critical Listening:</i> 7.1.1, 7.1.2, 7.1.3, 7.2.1, 7.2.2 Supplemental Reading 27. 5
week 7.		
Analysis of Sound Part II: Spectral Impression, Reverb, etc., Dynamic Range and Changes in Level, Noise and Distortion, Balance of Components within the Mix	Listening/Analysis: Lyle Lovett,	<i>Audio Production and Critical Listening:</i> 7.1.4, 7.1.5, 7.1.6, 7.1.7, 7.2.3 FINAL PROJECT ASSIGNMENT 3: 7+ Sources
week 8..		
Graphic analysis of sound, imaging, and special application tools, including ARC system, SPEAR, the Huddersfield Impulse Toolbox, and the FLUX plugins. Album front-matter, liner notes, credits and the production process for recorded media, (including	Listening/Analysis: Sara McLachlan, John Randall	<i>Audio Production and Critical Listening:</i> 7.2.4, 7.2.5, 7.3

the EP, LP, and boxset).		
week 9.		
<p>Graphic analysis of sound, imaging, and special application tools, including ARC system, SPEAR, the Huddersfield Impulse Toolbox, and the FLUX plugins.</p> <p>Album front-matter, liner notes, credits and the production process for recorded media, (including the EP, LP, and boxset).</p>		<i>Audio Production and Critical Listening: 7.5, 7.6, 7.7, 7.8</i>
week 10.		
STUDENT PERFORMANCES OF FINAL PROJECTS		FINAL PROJECTS DUE

Tentative schedule for Composition Seminar Winter 2013

Kui Dong

Project I: Expansion of one-minute piece to various lengths

Project II: Free form composition

Week 1 Group meetings

01/8 Discussion on musical form, Rhythm and Sound scope I (Music analysis: solo works)

Group composition exercise I: write 10 "Motif" together in 30 minutes

01/10 Discussion on musical form, Rhythm and Sound scope II (Music analysis: small Ensemble)

Extend two of the most favorite motif in to one- minute piece in class (45 minutes)

Assignment I: 1) Create a 3-4 minute piece using the chosen collective motif from the class Due Week 4

2) Create another one-minute piece using your OWN material

Week 2 Group meetings

01/15 Discussion on musical form, Rhythm and Sound scope III (Music analysis)

Making the one-minute piece into a 3-4 minute piece in class

01/17 Discussion on Assignment I

Week 3

01/22 Music to Image

01/24 Music to Image exercise, scoring for silent film

Week 4 Individual meetings with Professor on project (20min each)

02/05

02/07

Week 5 Professor on tour (NO CLASS-Writing period)

02/12

02/14

Week 6 Individual meetings with Professor on project (20min each)

02/19

02/21

Week 7

Group meetings

02/19

Project reading in class

02/21

Project reading in class

Week 8

Group meetings

02/26

Guest visiting

02/28

Guest visiting

Week 9

Concert week

03/02

Preparation/Rehearsal for the final concert

03/04

Preparation/Rehearsal for the final concert