

LSU - MUS 3745 - Introduction to Computer Music - Course Syllabus - Spring 2013

Class time: 10:30 – 11:20 am, M W F

Room: Music and Dramatic Arts, 248

Lab: School of Music, 203

Ben Taylor - btayl61@lsu.edu - 434-249-5008

Supervising Professor: Stephen David Beck

Office Hours: SoM 203 – Monday 4-5 pm or by appointment

Final Concert: April 29, 2013 4pm

Final Exam: May 11, 2013 10am - Noon

Materials

All are available on reserve at the Music Resources Library in Middleton.

Electric Sound, Joel Chadabe (203, library reserve)

Audio Culture, Christopher Cox and Daniel Warner (203, library reserve)

Electronic and Experimental Music, Thom Holmes (203, library reserve)

An Introduction to Music Technology, Dan Hosken (203, library reserve)

The Computer Music Tutorial, Curtis Roads (203, library reserve)

Course Description

Introduction to techniques and technologies in computer music, including principles of sampling, tape music, digital audio, sound design, music synthesis, signal processing, and sound art composition.

Course Outline

The course will be divided into three sections: Exploring Sound, Making Sound, and Making Music. Each section will consist of readings, lectures, listening assignments, and hands-on demonstrations and will conclude with a short compositional project that enables students to put these ideas into action. Students will be expected to attend class, participate in class discussion, and maintain an on-line listening journal (Moodle).

Schedule

** Fridays we will meet in the studio at SoM 203 unless noted otherwise

Unit 1: Exploring Sound

Week 1

Jan 14 – Overview, Syllabus

Jan 16 – What is Electro-acoustic/Computer Music? Futurism, Russolo, Early Electronic Instruments
Luigi Russolo, "The Art of Noises: Futurist Manifesto," *Audio Culture* 10-14

Jan 18 – Tour of Lab Equipment, Theramin Demonstration

Week 2

Jan 21 – MLK Holiday, NO CLASS

Jan 23 – Musique Concrète, Tape Music, Pierre Schaeffer

DUE: Assignment 1 - Listening Comparison

Holmes, "Musique Concrète in France," 45-56

Jan 25 – Sound Walk and Recording

Pauline Oliveros, "Some Sound Observations," *Audio Culture* 102-106

Hosken, "Sound Properties and the Waveform View," 17-31

Week 3

Jan 28 – Introduction to PreSonus Studio One software

****Meet in Lab on Monday this week instead of Friday**

Jan 30 – Paris Studio and Tape Techniques

Holmes, "Tape Composition and Fundamental Concepts," 123-139

Feb 1 – Paris Studio cont'd

Pierre Schaeffer, "Acousmatics," *Audio Culture* 76-81

Week 4

Feb 4 – Tape Music since Paris

Feb 6 – Aesthetics of Noise

Brian Eno, "The Studio as a Compositional Tool," *Audio Culture* 127-130

John Cage, "The Future of Music: Credo," *Audio Culture* 25-28

Feb 8 – Studio Lesson

Week 5

Feb 11 & 13 – Mardi Gras Holiday, NO CLASS

Feb 15 – **Project 1 Due**, in-class listening and critique

Week 6

Feb 18 – Exam Review

DUE: Listening Journal

Feb 20 – **Exam 1**

Feb 22 – Studio Lesson + Acoustics and the Science of Sound

Unit 2: Making Sound

Week 7

Feb 25 – History of the Cologne Studio

Holmes, "*Elektronische Musik* in Germany," 56-68

Feb 27 – Additive Synthesis

Hosken, "Electronic Sound Production" 198-204

Mar 1 – Studio Lesson

Week 8

Mar 4 – AM & FM Synthesis

Hosken, "Synthesis Methods," 216-223

Mar 6 – Subtractive Synthesis

Mar 8 – Studio Lesson

Week 9

Mar 11 – American and Italian Electronic Music

Holmes, "Other Early European Studios," 69-78
"Columbia-Princeton Studio," 91-99

Mar 13 – Synthesizers & MIDI

Holmes, "The Early History of MIDI," 227-235

Mar 15 – Studio Lesson

DUE: Assignment 2 - Graphic Score

Week 10

Mar 18 – Guest Lecture

Mar 20 – Spatialization

Holmes, "Varese and the Listener's Experiment," 336-344

Mar 22 – Individual meetings about Project 2 in lab

Week 11

Mar 25 – **Project 2 Due**, Exam Review

DUE: Listening Journal

Mar 27 – **Exam 2**

Mar 29 – Studio Lesson and Project 2 Listening

SPRING BREAK April 1-5

Unit 3: Making Music

Week 12

Apr 8 – Graphic Scores

Earle Brown, "Transformations of a Radical Aesthetic," *Audio Culture* 189-195

Apr 10 – Sampling and Plunderphonics

John Oswald, "The Ethics of Musical Debt" *Audio Culture* 131-137

Apr 12 – Studio Lesson

Week 13

Apr 15 – Contemporary Computer Music

Apr 17 – Live Electronic Music

Holmes, "From Transistors to Microprocessors," 272-277
"ONCE Festival and Sonic Arts Union," 383-397

Apr 19 – Studio Lesson

Week 14

Apr 22 – Video + Music

Apr 34 – Mobile and Networked Music

Apr 26 – Project 3 Due

Week 15

Apr 29 – **High Voltage Concert, 4pm**, School of Music Recital Hall

May 1, May 3 – Exam Review

Finals Week

May 11 – **Final Exam, 10am-Noon**
Final Project Due

Listening List

Etude Aux Chemins de Fer - Pierre Schaeffer
Come Out - Steve Reich
Different Trains - Steve Reich
Willaims Mix - John Cage
Poeme Électronique - Edgard Varése
Concrete PH - Iannis Xenakis
Synchronisms No. 6 - Mario Davidovsky
Thema – Omaggio a Joyce - Luciano Berio
Sonic Contours - Vladamir Ussachevsky
Low Speed - Otto Luening
A Day In The Life - Beatles
Gesang der Jünglinge - Karlheinz Stockhausen
Studie II - Stockhausen
Idle Chatter Series - Paul Lansky
Motherless Child - Paul Lansky
Silver Apples of the Moon - Morton Subotnik
Mutations 1 - Jean-Claude Risset
Stria - John Chowning
Chef d'oeuvre - Jon Appleton
Rainforest IV - David Tudor
I Am Sitting In a Room - Alvin Lucier
Hornpipe - Gordon Mumma
Point Line Cloud - Curtis Road
Speech Songs - Charles Dodge
Klang - Jonty Harrison
Unsound Objects - Jonty Harrison
Dripsody - Hugh le Caine
In Chuck - Steve Beck
Head Rhythm 1 - Maryanne Amacher
Piano 7hz - John Bischoff

Grading Criteria

Course grades will be determined by the following formula:

Assignments 1 & 2	5% each
Online Listening Journal	10%
Composition Projects (2)	10% each
Final Project	15%
Section Exam (2)	15% each
Final Exam	15%

Each grading criteria will have a scoring base of 100 points. Course grades will be averaged at the end of the semester and awarded on the following scale:

A	90.0 – 100.0
B	80.0 – 89.9
C	70.0 – 79.9
D	60.0 – 69.9
F	<60

Project 1 – Due February 15

Procedure

1. Record 2-3 audio samples using the Sony Digital Audio Recorder.
2. Clean each sample with Audacity, eliminating unwanted noise and extraneous sounds from beginning or end of the desired sample.
3. Apply the concepts of basic tape manipulation to create a 60-second musique concrete piece with Studio One, including at least 3 different types of manipulation, which has a beginning, middle, and end.

How to Submit

Drop the following items into the Project 1 folder on the main SoM 203 machine desktop. Put all files in one folder that is titled LastName_Project1.

1. Final piece (Studio One project)
2. Original sound samples
3. Written paragraph on concept
4. Written paragraph on method and techniques used

In addition, please export your project as a wav or aiff file and upload it to our SoundCloud group:

MUS 3745 @ LSU

soundcloud.com/groups/mus-3745-lsu

(The link is also on Moodle. You will have to create a SoundCloud account to do this.)

Project 2 – Due March 25

Procedure

1. Create electronic samples using synthesis techniques (Additive, FM, AM, etc)
2. Apply the concepts of basic tape manipulation to create a 60 to 90-second piece with Studio One.
3. Include at least 3 different types of synthesis and at least 3 different types of manipulation.

How to Submit

Drop the following items into the Project 2 folder on the main SoM 203 machine desktop. Put all files in one folder that is titled LastName_Project2.

1. Final piece (Studio One project)
2. Original sound samples
3. Written paragraph on concept
4. Written paragraph on method and techniques used

In addition, please export your project as a wav or aiff file and upload it to our SoundCloud group.

Project 3 – Due April 26

Procedure

1. Use any audio at your disposal (including audio recording, synthesis, sampling, MIDI)
2. Clean the sample files with Audacity, eliminating unwanted noise and extraneous sounds from beginning or end of the desired sample.
3. Apply the concepts learning in class to create a 3 - 4 minute piece.

How to Submit

Drop the following items into the Project 3 folder on the main SoM 203 machine desktop. Put all files in one folder that is titled LastName_Project3.

1. Final piece (Studio One project)
2. Written paragraph on concept
3. Written paragraph on method and techniques used

In addition, please export your project as a wav or aiff file and upload it to our SoundCloud group.

Final Project – Due May 11

Procedure

1. Make final adjustments to Project 3.
2. Create a visual score of your final project. Show musically relevant information (time, pitch/frequency, texture) Score must be on an 8.5x11 size paper or larger.

How to Submit

Hand in graphic score.

Drop the following items into the Final Project folder on the main SoM 203 machine desktop. Put all files in one folder that is titled LastName_Final.

1. The final piece
2. Written paragraph on adjustments made.

Qualified students seeking accommodations under the Americans With Disabilities Act are required to self-identify with the appropriate campus office.

This is a certified Communication-Intensive (C-I) course which meets all of the requirements set forth by LSU's Communication across Curriculum program, including:

- instruction and assignments emphasizing informal and formal writing and speaking;
- teaching of discipline-specific communication techniques;
- use of draft-feedback-revision process for learning;
- practice of ethical and professional work standards;
- at least 40% of the course grade rooted in communication-based work; and
- a student/faculty ratio no greater than 35:1

Students interested in pursuing the LSU Distinguished Communicators certification may use this C-I course for credit. For more information about this student recognition program, visit www.cxc.lsu.edu