

**Music 111 – Introduction to Music Technology**  
**Winter Quarter, 2010**  
**Syllabus**

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## **Course Information**

### **Days and Time:**

M & W from 10:55 AM to 12:15 PM in Classroom Building, room 107.

### **Office Hours:**

T & TH from 1:00 PM to 3:00 PM in Music Building, room 107 – or by appointment

### **Instructional Support Technician:**

James Dethlefsen is an Instructional Support Technician in the Music Department and he holds regular hours in the CSUB Music Building every business day. If you need assistance in the lab, he is the first person you should contact if I am not available. He can be reached by phone at 654.2520 and via email at [jdethlefsen@csub.edu](mailto:jdethlefsen@csub.edu).

## **Course Description**

***Music 111 - Introduction to Music Technology*** - is going to focus on many aspects of Music Technology. We will investigate some rudimentary principles of acoustics, MIDI, sequencing, notation, and digital audio. We will also explore the history of Electronic Music, study the composers and their compositions for the technical and aesthetic decisions that shaped their work. Lastly, we will delve into current computer software that we will use to compose our own Electronic Music

### **Learning Goals:**

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

- 1) Define some terms associated with Electronic Music, such as: ampere, amplifier, attack, audio, buffer, clipping, channel, compression, decibel, envelop, equilization, filter, frequency, gain, gesture, headroom, MIDI, mixer, multi-track recording, pan, parameters, quantization, recording (audio vs. MIDI recording), sampler, sequencer, synthesizer, synthesis, velocity and others.
  
- 2) Trace a basic history of Electronic Music through the 20th century and beyond.

- 3) Record and edit audio (with microphones, a computer and a digital audio interface) at a workstation, in a studio or on location, using Logic 9 or Garage Band.
- 4) Use music production and creativity software (Logic 9 and Garage Band) to create original compositions.
- 5) Create a professional quality audio document of your compositions.

### **Requirements:**

Students are required to spend time outside of class working on the assignments for Music 111. Some of that time every week should be spent in the CSUB Music Lab working with and exploring the software introduced in the course and some of the time will be spent reading about, listening to or researching aspects of the class. I have supplied a list of composers to study and a healthy list of listening examples I expect students to explore.

Additionally, as part of the audio recording component of the course, students will be required to attend a recording sessions hosted by the CSUB Music Department on **March 1, 2010**.

### **Miscellaneous Materials:**

Students will need to provide their own set of headphones with a 1/8- inch male connector. I strongly suggest that you look for headphones with a closed-ear design. Ear-bud phones will work, but they get a bit uncomfortable and don't always give the best frequency response - making mixing difficult.

Students are required to provide their own CD-R media (roughly 6-8 discs) and paper sleeves or CD jewel cases (the thin ones are OK) to house their CD's. Students will **ABSOLUTELY** need to place their finished CD's in some sort of jewel case so that the disc does not get damaged before the instructor grades and returns the project.

### **Grading:**

Class Participation	10%
Homework (4)	20%
Projects (4)	40%
Final Project	30%

**Class Participation** is mandatory in Music 111. Be on time and attend every class.

**Homework assignments** could be an in-class "hands-on" task, a take-home reading assignment coupled with a written summary of the article or a listening assignment with a written summary of the works studied. These assignments will

be assigned sporadically throughout the quarter – each HW assignment is worth 5% of your final grade.

## **Projects**

### **#1 – Two page paper about an electronic instrument of your choice (10% of grade)**

The student will choose an electronic instrument to research and write a two-page paper about the instrument – from sound-production to practical uses. Students should include a brief historical overview and create and submit a YouTube playlist to the instructor highlighting particularly stunning performances using this instrument. In an effort to foster diversity, the instructor will assign instruments for specific students based on your interests. We will not limit ourselves to the typical electric guitar or electric bass; I urge you to think about wind controllers, keyboard instruments, the reactable and even early instruments like the theremin and Ondes Martenot. There are a ton of possibilities out there – investigate the options and create a short list of three instruments you are interested in studying. I will choose your topic based on that information while also ensuring that each student studies a different instrument.

Students should type the paper in Microsoft Word using a normal font and nothing larger than 12-point font size. Papers should be printed and turned in to the instructor on **February 3, 2010**.

### **#2 – Personal Aesthetic Composition using Garage Band (MIDI only) (10% of grade)**

The student will use Garage Band to create an original composition that is representative of the students' musical taste and individual aesthetic tendencies. This composition should utilize at least 6 different tracks, four different instruments/synthesizers and be between 2 and 3 minutes in length.

Students should bounce and burn a copy of the final composition and turn it in to the instructor on **February 22, 2010**.

### **#3 – Song Recording Project (Class Project) (10% of grade)**

Students will set-up and oversee a recording session featuring a yet to be determined ensemble or ensembles. This event will occur on **March 1, 2010**. Students should secure this night off from work ASAP because recreating this environment will not be possible – thus, make up opportunities are not likely.

#### **#4 – In-class Presentations/Tutorials on aspects of Logic Pro 9. (10% of grade)**

Students will work in groups of two for this project and be assigned specific software instruments or effects from Logic 9. Student groups will learn those aspects of the software (beyond what is examined in class) and become fluent in their functionality and uses. Students will present a short, in-class presentation to teach the class what you have learned. Students are expected to use musical examples, handouts and anything else deemed appropriate in this presentation.

**Presentations will take place on March 8 and 10 during class time.**

#### **Final Project**

##### **Composition in Logic Pro 9 (30% of grade)**

These compositions should be at least 4:00 minutes in length and must meet the following criteria:

Contain at least 8 different tracks, at least two of which are audio tracks, and six of which are audio instrument/software synthesizer tracks.

Use at least three different types of automation data (volume, panning, solo, mute, specific automation for any of the software instruments/samplers/synthesizers).

The composition should be mixed and bounced to compact disc and clearly marked with the students' name and title of the piece. Be sure to bounce and burn a disc at least once before you turn in the project because your work will sound significantly different on a stereo (home, car, walkman etc.) than it does on the headphones in the lab.

Students should bounce and burn a copy of the final composition and turn it in to the instructor on **March 15** – the last day of classes - by 2 PM.

These compositions will be performed (on loudspeakers) as our final exam during our scheduled **Final Exam Time**, which is still TBD. All students are required to attend and have typed program notes for their composition outlining the technology and method they used to create their piece.

## **Weekly Topics:**

### **Week #1 (Jan. 6)**

Policies and Procedures for the CSUB Music Lab

### **Week #2 (Jan. 11 and 13)**

What is MIDI? What is Digital Audio? How are they different?

### **Week #3 (Jan. 20)**

Electronic Music and Computer Music Composition

### **Week #4 (Jan. 25) (No class on 1/27)**

Using iTunes

### **Week #5 (Feb. 1 and 3)**

Sequencing: Introduction to Garage Band (Interface, Instruments and Recording)

### **Week #6 (Feb. 8 and 10)**

Garage Band continued (Loops, Editing, Automation)

### **Week #7 (Feb. 15 and 17)**

Garage Band continued (Mixing, Mastering, Effects, Bouncing)

### **Week #8 (Feb. 22 and 24)**

Introduction to Logic (Menus, Arrange Window, Recording, Loops and editing possibilities)

### **Week #9 (March 1 and 3)**

Logic Continued (Instruments, Synths and Samples)

### **Week #10 (March 8, 10 and 15)**

Logic Continued (Effects, Mixing, Editing Audio, Bouncing, etc.)

## Music 111 – Introduction to Music Technology - Listening List

**Valse Sentimentale** by Pytor Ilyich Tchaikovsky (1882)

Performed by Clara Rockmore, theremin and Recorded in 1977

**Etude Aux Chemins De Fer** by Pierre Schaeffer (1948)

**Williams Mix** by John Cage (1952)

**Gesang der Junglinge** by Karlheinz Stockhausen (1955-56)

**Poème électronique** by Edgard Varése (1958)

**Revolution 9** by the Beatles (1968)

**Mutations** by Jean-Claude Risset (1969)

**Hibiki-Hana-Ma** by Iannis Xenakis (1970)

**Stria** by John Chowning (1977)

**Six Fantasies On a Poem by Thomas Campion: Her Song** by Paul Lansky (1978)

**Unfamiliar Wind (Leeks Hills)** by Brian Eno (1978-82)

**Perfect Way** by Green Gartside, David Gamson, Gartside Paul Strohmeyer (1986);

Performed by Miles Davis

**Idioteque** by Radiohead (2000)

**The Eleventh Hour** by Jim Scully (2001)

**Pagan Poetry** by Bjork (2001)

**Hide and Seek** by Imogen Heap (2005)

**Cymbal Rush** by Thom Yorke (2006)

**The Earth** by Imogen Heap (2009)