Music 5

Lecture 1

Thursday, April 9, 2020

Lecture Outline

1. Announcements
2. General Information
3. Course Overview
4. Introductions
5. Module 1: What is Music?
6. Module 2: Music Technology
7. Assignments and Quizzes

Announcements

- **The following items are DUE before Sunday, April 12 at 11:59 pm:**
  - Module 1 Quiz
  - Module 1 Writing Assignment
  - Module 2 Quiz
  - Module 2 Studio Work
- We will briefly go over these items during lecture today. If you need more guidance, please email me with questions. You can also set up a time to meet with me individually over Zoom.

General Information: My office hours

- My office hours are currently set by appointment. The advantage of this setup is that it allows me to meet individually with each student who needs help at a time that works for both of us.
- If several students need help on a particular assignment, I will consider holding special office hours
- If you would prefer that I hold regularly-scheduled office hours, please let me know. My setup is flexible.

General Information: Policies

- **Registration Policy**:
  - The deadline to register as **P/NP** has been extended to the **end of Week 10**
- **Late Assignment Policy**:
  - We will **deduct 10%** from the total possible points for each day the assignment is turned in late. For example, if the assignment is out of 5 points, we will deduct 0.5 points for each day the assignment is late.
  - We will only accept assignments which are **no more than 2 days late**. In other words, an assignment which is turned in 48 hours after the deadline will receive a **zero**.

General Information: Section website

chadmckell.com/mus5

- All lecture slides for my section discussions (i.e. these “live sessions”) will be posted on the section website linked above
- Other relevant material may appear here as well

General Information: Zoom

- All live sessions and office hours will be held over Zoom
- If you can’t hear me or the audio quality is poor, please interrupt me so that I can resolve the issue
- Unless there are objections, I will record each live session and post it on Canvas. If any of you prefer not to be recorded, please email me your concerns so that we can come up with a solution.

General Information: UCSD Music

- The UCSD Music Department primarily specializes in classical music of the 20th and 21st centuries. This type of music is often called **new music**.
- New music is likely different from music you would encounter in a traditional music conservatory or a typical “piano lesson” setting
- **We will discuss more about new music in today’s live session**
- (As a side note, UCSD doesn’t **exclusively** focus on new music. Many other styles are showcased in our concerts and discussed in our courses, including traditional Western classical music.)

Course Overview: What is this course?

- This course covers important theories and techniques of **music** developed over **time** (note that music is an art form whose medium is *sound*; hence, the course is aptly named “Sound in Time”).
- Emphasis is given to music of the **20th and 21st centuries**, especially electroacoustic and computer music
- My **main goals** as a teaching assistant are to help you
    - Gain an appreciation for sound both as a physical phenomenon and an artistic medium
    - Strengthen your ability to write about music
    - Build your confidence as musicians

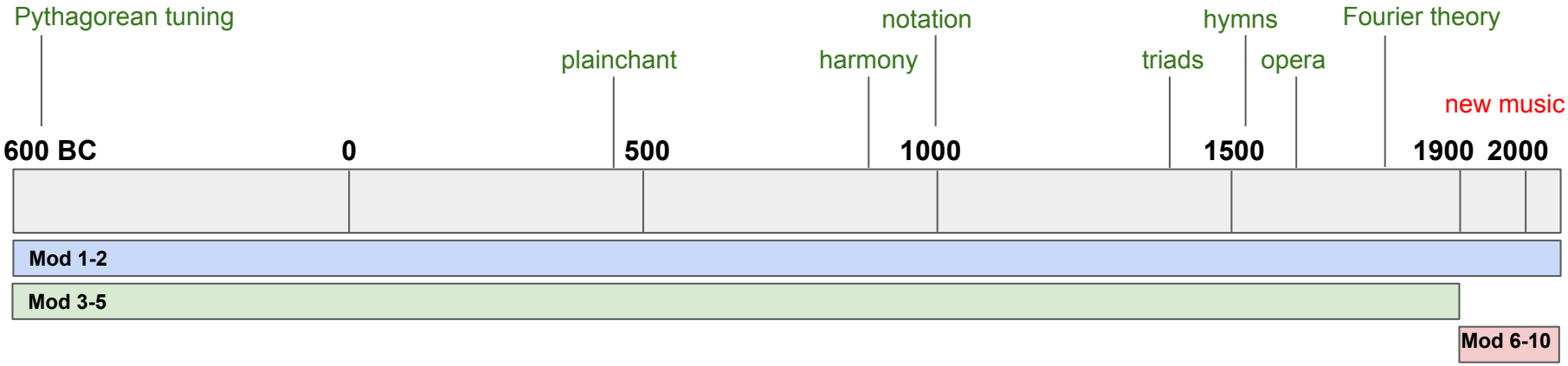
Course Overview: What is this course?

- In the section lectures, we will cover techniques for completing the writing assignments, performances, and composition exercises
- No previous musical background is required

Course Overview: What is this course?

- Below are the main topics covered in each module. The course covers both **traditional** and **experimental** music concepts.
  - **Module 1:** What is Music?
  - **Module 2:** Music Technology
  - **Module 3:** Frequency
  - **Module 4:** Music Intervals
  - **Module 5:** Music History and Music Perception
  - **Module 6:** New Music (Noise)
  - **Module 7:** New Music (Remix)
  - **Module 8:** New Music (Machine Improvisation)
  - **Module 9:** New Music (Computational Creativity)
  - **Module 10:** New Music (The Future of Music)

Course Overview: What is this course?



Course Overview: Why take this course?

- Music has been an important aspect of society throughout time. By studying it, we can come to better appreciate our history and current artistic culture.
- Music can be instrumental in telling a story. For example, in film and video games, music can be used to
    - Develop a particular mood for a scene
    - Give a character a unique personality
    - Transition effectively between scenes
- Music can make human experiences more immersive, exciting, or meaningful
- As computers have become more advanced and ubiquitous in society, their use in music and other forms of art has become more prevalent

Introductions: Who am I?

Chad McKell

- Major: Computer Music (Ph.D. student)
- Hometown: L.A. area (near Magic Mountain)
- Background: physics → audio/graphics
- Research: sound synthesis for computer animation




Introductions: Who are you?

Background

- What is your educational background (major or other academic interests)?
- Do you have any previous musical training?
- Do you have any other relevant experience?

Motivation

- What do you hope to get out of this course?

Course Overview: Grading breakdown

The grading is broken down as follows

- Writing Assignments: **20%**
- Studio (Creative Projects): **25%**
- Stage (Group Performances): **15%**
- Quizzes: **20%**
- Final Project: **20%**

Course Overview: Letter grade calculation

A	100%	to 93.33%
A-	< 93.33%	to 90%
B+	< 90%	to 86.67%
B	< 86.67%	to 83.33%
B-	< 83.33%	to 80%
C+	< 80%	to 76.67%
C	< 76.67%	to 73.33%
C-	< 73.33%	to 70%
D+	< 70%	to 66.67%
D	< 66.67%	to 63.33%
D-	< 63.33%	to 60%
F	< 60%	to 0%

Module 1: What is Music?

Module 1: Objectives

1. Define the four elements of musical tone
2. Demonstrate music as organization of tones
3. Give an example of how meaning of tone depends on context and culture
4. Distinguish between pitch and timbre
5. Give examples of musical timbre (sound color)
6. Demonstrate or give examples of reverb
7. Explain why the concept of silence can be part of music

We will review some of these points today. However, **our main focus will be on the live session topics**.

Module 1: Live session topics

- Review the **main themes of the course**
- Discuss **traditional vs. experimental music**
- **Review music pieces** posted on Canvas
- Conduct a comparative discussion about **artistic intent** in traditional and experimental music
- Discuss **personal preferences** in listening to music, ambience, and beauty of “non-musical” sounds
- Discuss **improvised vs. notated music**

Module 1: Main themes of the course

- Sound is a physical phenomenon, a tool for human expression, and a way to understand human culture
- Music is an art form whose medium is sound. **This course will consider how music formed an important part of different cultures over time.** Emphasis is given to 20th and 21st century music.
- The main pillars of this course cover six different aspects of music:

    1. Acoustics and music perception
    2. Environment/electronic music
    3. Mathematical music
    4. Music in politics and economics
    5. Group improvisation
    6. Artificial intelligence and music

Module 1: Traditional vs. experimental music

- ## What is music?
  - Music is an art form whose medium is **sound**
  - Can any sound be considered music? Does sound need to have a particular structure or set of structures to qualify as music? For example, would white noise qualify? Would silence?
  - A **musical tone** is a sound with four properties: **duration**, **frequency**, **amplitude**, and **timbre**.
- ## From a traditional Western classical music perspective:
  - Music consists of four key relationships between musical tones: **melodies** (tones played in succession), **chords** (multiple tones played simultaneously), **rhythms** (pulses or beats that organize the tones in time), and **textures** (tone qualities). These tone relationships are the basic components of **musical environments**.
  - Tones in melodies and chords are generally separated in pitch by certain **intervals that exhibit consonance** (fifth, fourth, etc) and a rhythm typically adheres to a **single, fixed time signature** at any one time

Module 1: Traditional vs. experimental music

- **From an experimental music perspective:**
  - Music is considered more broadly to be **any organization of sounds which creates (or was intended to create) an artistic experience for humans.** By “artistic experience”, we mean an experience that affects people emotionally, such as a spiritual impression, an experience of joy or laughter, a sense of awe, or a perception of beauty.
  - Do you agree with this definition of music? If not, why? Is this definition too broad? Is it too narrow? Can you justify your disagreement?

Module 1: Review music pieces

- **John Cage - *4’33”***
  - It would appear that this piece is merely composed of **silence**. This may have been Cage’s intention. However, people often view this piece as being composed of the sounds which are present in the surrounding physical environment during the 4 minutes and 33 seconds (e.g. coughing, AC noise, people whispering their dissatisfaction with the piece, etc).
- **Alvin Lucier - *I Am Sitting in A Room***
  - Speech is recorded in a room and played back again and again until the resonant frequencies of the room---which are excited by the speech---reinforce themselves and eventually dominate the sound

Module 1: Review music pieces

- If we accept these pieces as music, then any sound or absence of sound may be viewed as a musical tone, and any organization of musical tones which creates an experience may be thought of as music. (This is the perspective taken in experimental music).
- Three different organizational music structures were mentioned in the video lectures: **traditional Western classical** (e.g. Beethoven), **experimental Western classical** (e.g. Cage), and **Japanese classical** (e.g. Gagaku). Many more organizational music structures exist besides these three.

Module 1: Artistic intent

- **Is artistic intent a defining feature of music?**
  - Similar to traditional composers like Beethoven, Cage and Lucier have intentionally organized sounds (or an absence of sound) for their audiences
  - If a person is artistically impacted by the works of Cage or Lucier, **what would you call what Cage and Lucier have created, if not music?**
  - It would appear that the music compositions of Cage and Lucier function in a similar way to the music of Beethoven in that they each create a meaningful experience for an active listener
  - “When any sound is presented with the intention of being music, or when a person perceives a sound as music, we will consider it music”. -Shlomo Dubnov
  - Do animals make music (independent of any human input or conceptualization)?

Module 1: Personal listening preferences

- New music is controversial. It can be challenging---even downright unpleasant---for many to listen to. Some people regard new music as pompous academic nonsense. Others view it as supremely beautiful and emotionally impactful.
- Regardless of which camp you fall in (or maybe you fall somewhere in between), what is less controversial is that new music now plays a significant role in present-day culture through popular media (e.g. film, video games, rock music, etc).
- For this reason, I argue that new music is worth studying so that we can at least better understand what it is and how it impacts our culture. Hopefully, many of you will also come to appreciate and value at least some aspects of it. (Some of you may never like anything about it, and that’s okay, too).

Module 1: Improvised vs. notated music

Improvised music (associated more with experimental music):
https://www.youtube.com/watch?v=QBzHqW4V3lA

Notated music (associated more with traditional music):
https://www.youtube.com/watch?v=g0sKbCiXJvM

Module 1: Other points of discussion

- Computers and electronics allow most people in the world to be immersed in music. However, before the advent of these modern technologies, hearing music on a regular basis would have been rare.
- The context of a music composition changes its meaning (e.g. religious ritual vs. fast food commercial)

Module 1: Readings and the film

Readings:

- Bakan: *Traditions and Transformations*
- Luigi: *The Art of Noises*

Film:

- Goodall*: Origins of Music*

Module 2: Music Technology

Module 2: Objectives

1. Review three roles of technology in music: production, delivery, and recommendation
2. Show ability to identify noise, samples, and computer processing in a song
3. Show awareness to musical form and be able to identify musical climax

Again, we will review some of these points today, but **our main focus will be on the live session topics**.

Module 2: Live session topics

- Review **key concepts** about music technology
- **Review music pieces** to reinforce concepts from class (use of noise, samples, computer processing, musical form, musical climax)
- Help with installing **Audacity**, show basic use of opening and saving files, waveforms, etc.
- Explain how to create a **SoundCloud** account and use it to submit homework
- Demonstrate a basic use of **Pure Data (Pd)** and discuss options for using it

If we don’t get to all of these points in today’s discussion, and you still need help, please email me with questions

Module 2: Key concepts

- Computers and electronics provide us with a **much wider variety of options** for creating music, both in terms of the types of musical tones (e.g. synthesized sounds, digital effects, etc) and the tools for organizing musical tones (e.g. digital audio workstations, MIDI, etc)
- The **role of music technology** has three main aspects:
    - **Creation**: production tools (Ableton, digital effects, synthesizers)
    - **Content**: databases (iTunes, Google Play, Pandora, YouTube, Spotify)
    - **Community**: sharing tools (SoundCloud, Bandcamp)
- There is some overlap between content and community. For example, you can also share music using YouTube, and SoundCloud is also a database.

Module 2: Review music pieces

- **My Bloody Valentine - *You Made Me Realise***
  - Demonstrates the use of noise and effects

- **Fatboy Slim - *Funk Soul Brother***
  - Features sampling, looping, and processed sounds

Module 2: Audacity, SoundCloud, and Pure Data

- **Follow these links to set up the required audio software tools:**
  - Audacity: https://www.audacityteam.org/download/
  - SoundCloud: https://soundcloud.com/
  - Pure Data (“vanilla” version): https://puredata.info/downloads
- **The tools below are optional, but you may find them useful:**
  - LMMS: https://lmms.io/wiki/index.php?title=Main_Page
  - MuseScore: https://musescore.org/en

Assignments and Quizzes

Module 1: Writing assignment

- Follow the basic guidelines outlined on Canvas
- **Minimum length**: **50 words per prompt** (since there are five prompts, the total word count for this assignment should be at least **250** words)
- Due to the fact that I've had to cram a lot of material into this first live session, we probably won't have time to dive into the specifics of this assignment now. However, don't stress too much about the assignment. Just be sure to answer each prompt as best as you can in at least 50 words.
- If you have any questions, please email me early so that I can respond before the deadline on April 12

Module 2: Studio work (“Beautiful Sound”)

- Follow the basic steps outlined on Canvas
- **How long should your submission be? Here are the guidelines:**
  - Required duration of your sound: **15-30 seconds**
  - Required length of your answer to Part 2: **50-100 words**
  - Required length of your answer to Part 3: **50-100 words**
- The sound you choose can be anything you find meaningful. It could be part of a song you like or it could simply be a sound in your physical environment.
- See examples on Canvas of student submissions from past years if you need help coming up with ideas

Module 1 and 2: Quizzes

- The quizzes are relatively easy
- The answers to all questions are found in these slides
- I recommend completing the quizzes shortly after this live session while the information is still fresh on your mind

Questions