

Syllabus

MUST 121-1 – Introduction to Computer Music

Spring, 2017

11:00–12:15 TR in MI 223A (Studio 9)

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Course Overview and Introduction

Course Description

An introductory course in computer music. Topics include editing, musique concrète, digital audio, MIDI, sequencing, sampling, synthesis, and signal processing. Open only to music majors.

Purpose of the Class

This class is designed as an introduction to the computer music sequence for music composition Sonic Arts majors, and to the use of the studio as a compositional tool for MMP majors.

Learning Objectives

As a result of taking this class students should:

- Be able to cite examples of electronic music repertoire and explain techniques that are commonly used
- Be able to define key electronic music terms
- Be able to work with a variety of file formats and move between programs such as Audacity, eAnalysis, Noteflight, and Logic
- Be able to create, edit, and orchestrate audio and MIDI sequences
- Be able to control the parameters of a subtractive synthesis plugin
- Be able to use a variety of effects such as EQ, delay, and reverb
- Be able to create an effective mix with good signal level and balance between tracks
- Be able to automate control of parameters such as volume, sustain, pan, and modulation
- Be able to create an electronic lead sheet
- Have developed an online portfolio to exhibit their work
- Be able to promote their work through concerts, Internet radio, CDs, and websites

Comportment

Developing communication skills and character strengths is the most important part of your education. These include grit (perseverance and passion for long-term goals) and self control (i.e. the ability to avoid distractions in order to have time to do the work). For more information, visit rkwilley.com/character.

Electronic devices can only be used in class when directed to do so in order to work on lab exercises. Do not otherwise use cell phones or computers at any other time, and ask permission when in doubt. The first time you break this rule you will be asked to leave the classroom for the rest of that period and will be marked absent for the day. The second time you break this rule you will receive a failing grade for the semester.

You will be expected to be prepared to participate in class when discussing topics from the reading and listening assignments. Pay attention to spelling and grammar in your written work, and check that what you email and upload is at a level of English expected at a college level. Avoid slang and profanity.

No late work will be accepted. Plan ahead and get your assignments in on time. Let Dr. Willey know if you would like to discuss strategies for staying on track.

Required Materials

Bring the following supplies to every class meeting. On days when you do not you may be marked off the equivalent of half an absence. All work in the Studio 9 is done with headphones. You will need:

- Headphones (not earbuds) with 1/8" stereo miniphone TRS plug. Get an adapter if you have headphones with a 1/4" plug so that you can plug into the computer's 1/8" jack. Ear buds do not have enough low frequency response to hear the wide frequency spectrum of sounds covered in this class.
- Lab logbook (supplied by Dr. Willey) and pencil or pen.

Optional Materials

- Dan Hosken, *An Introduction to Music Technology*. 2nd edition. Taylor / Routledge, 2014. ISBN: 9780415825733
- If your headphones use a 1/8" plug you may wish to get an 1/8" to 1/4" adapter, so that you can plug your headphones into the 1/4" headphone

jack on the back of the Audibox audio interface.

- USB flash or hard drive. Your work cannot be saved on the computers in the studios since the workspace is automatically erased each time the computer restarts. Copy your work to your BSU Box account at ballstate.box.com, flash drive, or hard disk before leaving your workstation.

Attendance

Excused absences are those that arise as a result of personal or family emergencies, or certain school functions. All excused absences must be certified in writing and submitted to the instructor as early in the semester as possible. Determination of what constitutes an emergency will be made by the professor.

After four unexcused absences your grade will be lowered for each class you miss. If, for example, you had earned points for a “B” in the class but had five absences, your grade will be lowered one letter and you will receive a “C” for the semester. If you had earned points for a “B” in the class but had six absences, your grade will be lowered two letters and you will receive a “D” for the semester, etc.

Students arriving between one to five minutes late will be counted as tardy which is considered equivalent to half an absence. If you are more than five minutes late you will be marked absent. Leaving early without a valid reason will be treated as half an absence. Please speak with the instructor before class if you need to leave early.

Students are responsible for all material covered during any absences. Access course information on Blackboard or ask a classmate in order to find out what was missed, or meet during office hours.

You will be required to attend and review the EM|3 concert on Tuesday, February 23, and two or more concerts in the New Music Festival (March 17–19). Other special events to be announced for extra credit.

Grading

Take notes and do the parts of your assignments as directed in your Lab notebook. Projects will be uploaded in electronic form to Blackboard, Box, SoundCloud, and Google Drive.

The points for assignments are equal to percentage points for the semester, so a 15-point project is worth 15% of your semester grade and skipping one will lower your grade a letter and a half.

There will be a total of 100 points possible in the course:

(16 points each, 64 points total) – Four Projects

(5 points each, 15 points total) – Three quizzes

(2 points each, 8 points total) – Four Lab logbook reviews of vocabulary, lecture notes, etc.

(3 points each, 9 points total) - Three concert reviews:

- Pendulum on January 13 or January 14 (6:30 or 8:00 pm) in the Planetarium. *Arrive at least 20 minutes early.*
- EM|Three on Monday, February 6 (7:30 pm) in Sursa
- EM|Four on Monday, April 24 (7:30 pm) in Sursa

(4 points) – One reflective essay at the end of the semester

Grades will be assigned with the following scale:

90–100 = A

80–89 = B

70–79 = C

60–69 = F

< 60 = F

Email

Read your BSU email regularly in order to get class messages sent to you through Blackboard. Visit Blackboard regularly to get updates on the schedule and specifics about assignments.

After sending email to your instructor, please allow up to 48 hours for a response, and do not expect action over the weekend. Review <http://rkwilley.com/email> for etiquette tips.

Privacy Policies

You will be using several external environments in the class such as Google Drive, Freesound, and SoundCloud. While in most cases you can make your material unlisted which makes it harder for people outside the class to find your work, be aware that anything on the Internet is potentially available to the public.

Learner Support

Contact Dr. Willey if you would like to meet outside of office hours.

Counseling Services. College can be a stressful time. Free and confidential psychological and career services are provided to students through the BSU Counseling Center at 285-1736. <http://cms.bsu.edu/campuslife/counselingcenter>

Disability Services. Please contact the professor as soon as possible if you need course adaptations or accommodations because of a disability. Ball State’s Disability Services office coordinates services for students with disabilities. Documentation of a disability needs to be on file in that office before any accommodations can be provided. Disability Services can be contacted at 765-285-5293 or email dsd@bsu.edu.

Schedule (watch Blackboard for changes)

Week	Class	Assignment (see details on Blackboard)
Module I – Musique concrète		
1 Jan 10, 12	Review syllabus, Start using Lab logbook. Define waveform, amplitude, intensity, music. Listening: Pierre Schaeffer’s “Étude aux chemins de fer”	Define music, noise, waveform, frequency (Hz), amplitude, intensity (dB), musique concrete Create ballstatebox.com and Freesound accounts. Record “interesting” source sound for musique concrète étude. Attend and review <i>Pendulum</i> Friday or Saturday night in the Brown Planetarium.
2 Jan 17, 19	Musique concrète history and techniques	Create SoundCloud and gmail accounts. Upload source sound to freesound.org, add description, work with transforming your source sound and plan form for Project I. Start linking your work to your Portfolio link page on Google docs.
3 Jan 24, 26	Mixing in Audacity, EQ	Mix Project I, turn in Lab logbook in class on Thursday.
4 Jan 31, Feb 2	Analyzing recordings with eAnalysis	Take Quiz 1 and finish and install Project I by 7:00 p.m. on Monday, February 6th (Musique concrète)
Module II – Sampling		
5 Feb 7, 9	Discuss Project I results Digital Audio Sampler layout in Logic Pro	Attend and review EM Three concert at 7:30 p.m. on Monday, February 6 th , create and share sampler layout
6 Feb 14, 16	Recording MIDI, automating volume, pan and filter settings Mapping keyboard controllers	Diagram sampler layout in Lab logbook, turn in Lab logbook in class on Thursday
7 Feb 21,	Mixing in Logic Pro	Quiz 2, finish and install Project II (Sampling) by midnight on Monday,

23		February 27
Module III – MIDI		
8 Feb 28, Mar 2	Chord symbols and form in pop music. MusicXML	Create a 2-3 minute arrangement of a song of your choosing in Noteflight for drums, bass, and chords.
<i>Spring Break</i>		
9 Mar 14, 16	Import your Noteflight score into Logic. Subtractive synthesis. Recording with a metronome. Quantization. Expression: pitch bend, modulation wheel, and volume change controllers.	Create an arrangement of your song that has a chord progression, a bass line played on a subtractive synthesis module, and a drum track that for each section of the song.
10 Mar 21, 23	Compose and record a new melody, quantize it, and add expression.	Turn in your logbook on Tuesday. Create a lead sheet for your song in Noteflight. Bounce two versions of your Logic sequence. Take Quiz 3, and link all your Project III assets to your Portfolio by Monday, March 27.
Module IV – Distribution		
11 Mar 28, 30	Discuss Project III results, concert promotion	Work on Project IV (Free)
12 Apr 4, 6	Mixer signal flow	Work on Project IV (Free)
13 Apr 11, 13	CD production	Work on Project IV (Free)
14 Apr 18, 20	3D mixing with pan, EQ, and reverb	Diagram 3D soundstage for Project IV mix in Lab logbook.
Wrapping Up		
15 Apr 25, 27	Reflective essay, what is music? Review vocabulary	Attend and review EM Four concert at 7:30 p.m. on Monday, April 24 th . Turn in Lab logbook in class on Thursday. Finish and install Project IV, make final adjustments to Portfolio page, write reflective essay and upload to Blackboard by 9:30 a.m. on Tuesday, May 2nd
Final exam period	Present Portfolio page, demonstrate and discuss Project IV results.	Create class CD and Bandcamp page

9:45– 1:45 on Tuesday, May 2 nd		
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