MUST 121: Introduction to Sonic Arts
Ball State University
School of Music

Class Meeting Times:
- TR 11:00 – 12:15 (Section 1)

Location: Media Lab (Studio 9)
Web Site: teachingmusic.keithkothman.com
Prerequisites: music major

Instructor: Dr. Keith Kothman
(kkothman@bsu.edu)

Office: MU 109B (often, MU 207)
Phone: 285-5503
Office Hours: tba

Course Description:

Introduction to Sonic Arts is an introductory course in sonic arts, musical creativity, and computer music. The course will focus on the aesthetics of sonic arts, historical and aesthetic readings, composition, audio, audio processing, and computer music.

The semester will be divided loosely into four sections, focusing theories and histories, and small projects; basic concrete music with two tracks; more advanced concrete music with granular synthesis; and concrete music with spectral processing along with audio plugins. There will be readings and assigned reflections, written quizzes, and listening quizzes.

Course Objectives:

- Students will gain an understanding of the historical and aesthetic contexts of sonic arts and computer music.
- Students will skills in audio editing.
- Students will be able to work efficiently in a multi-track audio environment.
- Students will be able to compose Concrete Music compositions using a variety of techniques.
- Students will gain an understanding of, and be able to use various software applications and plugins for the creation of creative computer music.

Academic Integrity:

Students of the university must conduct themselves in accordance with the highest standards of academic honesty and integrity. Academic dishonesty will be treated in accordance with the "Student Academic Ethics Policy". Please see the student code in the Ball State University Calendar book. No form of academic misconduct such as plagiarism or cheating will be tolerated—be it in the context of an exam, a quiz or a homework assignment. Students are encouraged to help/consult with one another outside of class, but copying answers or collaborating on more than one or two sample problems constitutes cheating. Note that it is very easy for an instructor to detect cheating (especially last-minute "copying") in this class, since answers are rarely uniform.

Email and Website Policies:

Students are expected to monitor their BSU email accounts on a regular basis. Periodically, I will need to send important information to you via email. BSU email can be configured to forward to an outside account if you so desire, but I am not responsible for keeping track of your personal (non-BSU) email addresses.

Information regarding course assignment, lectures, and other important notices will be communicated via the course website. It is the student's responsibility to check the website each day for additional explanations, updates on readings and other assignments, and alterations to course content.

Studio Policies

Your enrollment in this course serves as your agreement to abide by Music Technology Studio Policies. A copy of these policies will be available online at www.bsu.edu/met/gobbledygook/studio_manual.html. A summary of the most important guidelines for this class includes:

- Only authorized users are allowed in the studios, and only to use authorized equipment. Do not bring your non-musicTech friends to hang out with you. Outside visitors require prior approval from faculty or staff. As students in MUMET 140, you are only authorized to use the Media Lab.
- No food or drinks may be brought into the studios. You must keep all food and drink in the hallway.
- Do not move furniture from studio to studio.
- Keep the Media Lab neat and professional in appearance.

Materials Needed:

- Textbooks (available through the usual web retailers):
  - ⇒ Hoskens, Dan. An Introduction to Music Technology. Routledge, 2010.
  - ⇒ Cox, Christoph and Warner, Daniel, eds. Audio Culture: Readings in Modern Music. Continuum, 2004.
- Decent headphones for use in the Media Labs. Prices will run anywhere from $30 to $100 (or more) for a good pair. For those of you in the MMP or Sonic Arts program, you will use these throughout your time in the program, and professionally for much longer. All work in the Media Lab is done with headphones. *The Music Media Production Studios will not provide headphones for use in the Lab*.
- Thumb drives and/or other forms of portable storage, such as portable hard drives.

Software

The Music Technology Studios are Macintosh-based. All instruction takes place on this platform. That said, some of the software we will use is cross-platform, and the software that is not cross-platform will have Windows-based equivalents. Since we have a sufficient number of computers for all users in the program, you will not need to purchase your own software.

Grading:

Your final grade will be determined according to the following scale, subject to minor modifications if needed:

Reading Assignments:	10%
Section Quizzes:	30%
Small Projects:	40%
Final Project:	20%

Attendance Policy:

Attendance at class, Sonic Arts Technology and Composition concerts and Sonic Arts Technology-sponsored special events is mandatory. You are allowed six (6) absences from the combination of classes and all mandatory events. Seven absences and you fail the course. You will be given a schedule of outside class events.

In the extraordinary event that you cannot arrange your work or other class schedule around these events, please notify me in advance in writing (email). There will be a sign-up sheet for attendance outside of sonic arts technology events.

In the event that you miss a class, it is your responsibility to get the material covered from another student and/or the web. Neither the Graduate Assistants nor I will re-teach to you missed classes. Missed quizzes will only be made up in the event of verifiable illness or other emergency.

Special Needs:

Students needing special adaptations for the course, or who require special assistance in the event of an emergency evacuation should contact the instructor privately as soon as possible.

Course Outline:

Week	**Topics/Assignments**
1: 8/21, 8/23	Intro to class, intro to creativity; what is sound (IMT, Ch. 1); introduction to sonic arts. Readings: Cage, "Future of Music: Credo" (AC); Varèse, "The Liberation of Sound" (AC); Wishart, "What is Sonic Art?" (*On Sonic Art*, web link) Project: Listen/Notate, due 8/28
2: 8/28, 8/30	Physical properties of sound (IMT, Ch. 2); basics of field recording (portable recorders); concrete music. Readings: Attali, "Noise and Politics" (AC); Russolo, "The Art of Noises: Futurist Manifesto" (AC); Feldman, "Sound, Noice, Varèse, Boulez" (AC); R. Murray Schafer, "The Music of the Environment" (AC) Project: Soundwalk, due 9/4
3: 9/4, 9/6	**Quiz 1: topics from weeks 1 and 2; listening list #1**. Digital audio data (IMT, Ch. 5); audio editing software;

	Readings: Schaeffer, "Acousmatics" (AC); Oliveros, "Some Sound Observations" (AC); Eno, "Ambient Music" (AC); Cowell, "The Joys of Noise" (AC). Project: 2-track collage
4: 9/11, 9/13	Musical collage; digital audio hardware (IMT, Ch. 4); more audio editing. Project: continuation of 2-track collage, due 9/18
5: 9/18, 9/20	Listen to collage projects; the digital audio workstation (IMT, Ch. 6). Reading: Slouka, "Listening for Silence: Notes on the Aural Life" (AC); Eno, "The Studio as Compositional Tool" (AC). Project: A very quiet piece, due 10/2
6: 9/25, 9/27	Continuation of the digital audio workstation, especially mixing, panning, automation techniques. **Quiz 2: topics from weeks 3 – 5; listening list #2**. Reading McLuhan, "Visual and Acoustic Space" (AC);
7: 10/2, 10/4	Listen to very quiet pieces. Classic tape techniques for concrete music. Project: Multi-track concrete music, due 10/30
8: 10/9, 10/11	Granular synthesis, theory and tools.
9: 10/16, 10/18	More granular techniques; reverberation.
10: 10/25	(Fall Break, 10/23) Listening to works in progress.
11: 10/30, 11/1	Listen to multi-track music concrete projects. **Quiz 3: concrete music, granular synthesis, and reverb; listening list #3**. Audio and spectral domains. Project: Concrete music with granular and spectral tools, due 12/10.
12: 11/6, 11/8	The Fourier Transform; The Fast Fourier Transform; phase vocoding.
13: 11/13, 11/15	Spectral tools for phase vocoding; convolution
14: 11/20	Convolution tools; audio filters.
15: 11/27, 11/29	More audio filters; LFO modulation; other topics of choice.
16: 12/4, 12/6	Listening to works in progress. **Quiz 4: spectral processing; listening list #4**.
Final Exams	12/10, final projects due. 12/11 (9:45 – 11:45), listening session.