HUMA 2107 / CORE 2634 - Introduction to Electronic Music
Course Syllabus
HKUST Summer 2023, June 19 - July 15

Instructor:	Dr. Timothy PAGE
Email:	hmtpage@ust.hk
Office hours:	By appointment, MWF 13:00-14:00
Office:	SHAW 204
Instructional Assistants:	Galison LAU: galisonlau@ust.hk
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Lectures: SHAW 105	MWF 11:00 – 12:50
Tutorials: SHAW 105	T1 MWF 14:00-14:50
	T2 MWF 15:00-15:50
	T1C Mon 16:00-16:50

Course description

This course will develop students' appreciation of various types of electronic music via an open and creative environment for its composition. We will explore the nature of sound and approaches to its organization, listening deeply to music and the world around us. We will cover practice and theory in digital audio signal processing. Since we will be working with "concrete sound," students need not have any prior experience in music notation or composition to participate in the course. We will also cover some general topics from music theory to aid in our understanding and creativity.

The primary software platform we will be using is digital audio workstation software known as REAPER. We will also have the chance to learn some studio techniques in HUMA's new Electronic Music Studio in Shaw Auditorium, including recording and modular analog synthesis.

There is no final examination for this course. In lieu of a final, students will present their final projects to the class in a concert-like setting, and there will be a quiz at the end of the term covering theoretical and historical topics. A preliminary composition exercise is also due in lieu of a midterm examination, and will be presented in class.

Intended learning outcomes

On successful completion of the course, you will have learned to
- Demonstrate appreciation of and describe the features of various types of electronic music
- Apply various technologies for digitally processing audio
- Creatively organize sound into coherent works of music as a means of self-expression
- Demonstrate a broad understanding of electronic music's historical development

◦ Demonstrate an understanding of key issues in music aesthetics

Prerequisites

There are no course prerequisites for this class. While you do not need to have formal musical training to sign up for the course, you will find musical background to be an advantage.

Course Materials:

You will need to obtain your own copy of Reaper, a powerful but low-cost digital audio workstation software. You will receive instructions on how to do this in lecture.
You will need your own laptop, which you will occasionally be asked to bring for lecture and tutorials. Also, you must have a fast, reliable USB flash drive, because you may be transferring big files when you come to tutorials to share your work.

Course requirements

1. Much of what you learn will be assimilated via discussion and feedback on your work from me, Galison, and your peers, in both lecture and tutorial. Therefore, attendance and participation are absolutely crucial in both lecture and tutorial. This course moves incredibly fast in the summer session, and you cannot afford to fall behind! You must participate in discussions, as well as the presentation of your exercises and projects. For most of the course, you will be presenting your work in tutorials for evaluation and discussion, and for this reason your attendance in tutorials is all the more essential. **Failure to attend tutorials will lead to you not receiving credit for your homework**. **Do not take this course if you cannot commit to attending all the tutorials.** Absences will only be excused if you provide medical documentation. No cell phones are allowed in class. If you have your cell phone out during lecture or tutorial you will receive a zero for participation that day, as if you were absent.

2. Midterm project: composition of a work of musique concrète, with a duration of 2-3 minutes.

3. Final project: A fixed media work, in any style, of 3-4 minutes. We will explore the assignment in detail as the course progresses. **Attendance at the final concert in SHAW 103 on Saturday, July 15, 14:00-16:00 is mandatory. Do not take the course if you can't attend this concert.**

4. Written assignment: 2-3 page written review and analysis of a piece of electronic music, chosen from an album/playlist to be assigned.

Grading

Attendance and participation	15%
Portfolio of exercises/homework	15%
Recording report	10%
End-of-semester quiz	10%
Midterm project	20%
Final project	30%

TENTATIVE LECTURE TOPICS:

Session 1: The World as an Instrument
- Soundscape, deep listening
- Sound objects
- Field recordings
- Musique concrète

Session 2: Studio Techniques I
- Microphone types,
- Signal types
- Modular synthesis I: oscillators, control voltages, modulation, intro to VCV RACK

Session 3: Timbre, Orchestration, Counterpoint, Reaper DAW
- Tone color, timbre
- Vertical and horizontal layers in music
- Form
- Introduction to REAPER, editing basics

Sessions 4-7: Manipulating recorded sound
- Digital Audio Plugins
- Reverbs
- Delays
- Filters and Equalization
- Compression

Session 8: _Presentation of first student works_

Session 9: MIDI, VSTis
- MIDI
- Using MIDI in REAPER
- Creating a drum machine, working with the grid

Session 10: Rhythm

- ◦ Pulse, Meter, Time Signature
- ◦ Identification of Meter
- ◦ Syncopation
- ◦ Polyrhythm

Session 11: Fast Fourier Transform; Studio Techniques II
- ◦ Fourrier decomposition; frequency domain vs time domain
- ◦ Granulation
- ◦ Modular Synthesis II: Triggers and envelopes.

Session 12: Individual lessons, project development

Session 13: Presentation of final project,
- ◦ **Matinee Concert, Saturday, July 15, 14:00-16:00, SHAW 103**