

**Introduction to Electronic Music Composition**  
**(HUMA2107)** Division of Humanities, HKUST  
Spring 2021

Instructor:	Dr. Timothy Page
Email:	hmtpage@ust.hk
Office hours:	Via Zoom, by appointment, Mondays 10:30-11:30, (or by separate appointment)
Office:	Music Room A, Lo Ka Chung University Center (G/f)
Instructional Assistant:	Galison Lau
Lectures: (Via Zoom and/or in CYT G005):	Tue, 10:30-12:30
Tutorials:(Via Zoom and/or in CYT G005):	T1 Tue 15:30–16:20
	T2 Tue, 16:30-17:20
	T3 Tue, 17:30–18:20

### 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 some 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 brush on 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, including recording, modular analog synthesis, and mixing in 5.1 surround sound.

There is no final examination for this course. In lieu of a final, students’ final projects will be presented to the class in a concert setting, and possibly to the public via livestream broadcast. 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

- Appreciate and describe the features of various types of electronic music
- Show competence in 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 requirements

1. Most of what you learn will be assimilated in class. Therefore, attendance and participation are crucial. You will also need to attend one tutorial per week. You must also participate in the concert presentation of your final projects. This is
2. Midterm project: composition of a fixed media work, with a duration of 2-3 minutes. In certain instances this midterm project can also be the part of your final project (this will be decided on a case-by-case basis).
3. Final project: There will be multiple options for the format of your final project, which we will explore in detail as the course progresses
4. Report on an electronic music recording or live electroacoustic music concert. Depending on the situation of the pandemic, you will be required to do one of the following:
  - a) listen to one, full length album, or - circumstances permitting - attend one professional live concert featuring classical music, and write a two-to-four-page, double-spaced report on piece or part of a piece performed. I will provide you with options and suggestions for recordings to listen to, and more detailed guidelines for writing about them. As the situation evolves, I may provide suggestions for live events to attend – or, if there is a particular event you are interested in attending, you may ask me beforehand if it would be appropriate for the assignment.
  - b) Cosmopolis Festival: attend 2 concerts (online – or, circumstances permitting, live) from the University’s brand new Cosmopolis Festival. You will then write a two-to-four-page, double-spaced report on one of them. I will provide schedule and additional details as the concerts approach, if they indeed occur.

## Grading

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

## **TENTATIVE LECTURE TOPICS:**

### **Week 1: The World as an Instrument**

- the soundscape,
- field recordings
- deep listening

### **Week 2: Timbre, Space, Orchestration, Counterpoint**

- tone color, timbre
- space as a musical parameter
- vertical and horizontal layers in music

### **Week 3: Digital Audio Workstation**

- Editing in REAPER digital audio workstation

### **Weeks 4-5: Manipulating recorded sound**

- Digital Audio Plugins
- Reverbs
- spatialization
- Filters and Equalization
- Compression

### **Week 6: Rhythm**

- Meter, pulse, tempo, beat hierarchies
- looping, working with the grid in REAPER

### **Week 7: Presentation of first student works**

### **Week 8: Convolution and Granular Synthesis**

- Fourier decomposition
- phase
- frequency domain vs time domain

### **Week 9: Manipulating recorded sound, cont.**

- Time Stretching
- Pitch Shifting
- Distortion
- Bit Crushing

### **Week 10: Recording Instruments in the Studio**

- Basic studio techniques

- microphones types and placement
- operating a mixer
- 5.1 Surround

**Week 11: Live signal processing and control**

- Using Max/MSP to control live sound processing

**Week 12: Analog Synthesis Techniques**

- Frequency Modulation and modular synthesis

**Week 13: Presentation of final projects.** (Possible livestream concert details TBA)