

# MTEC 62A: COMPOSING & PRODUCING ELECTRONIC MUSIC I

## Foothill College Course Outline of Record

Heading	Value
<b>Effective Term:</b>	Summer 2021
<b>Units:</b>	4
<b>Hours:</b>	3 lecture, 3 laboratory per week (72 total per quarter)
<b>Advisory:</b>	Not open to students with credit in MUS 6 or 67.
<b>Degree &amp; Credit Status:</b>	Degree-Applicable Credit Course
<b>Foothill GE:</b>	Non-GE
<b>Transferable:</b>	CSU
<b>Grade Type:</b>	Letter Grade (Request for Pass/No Pass)
<b>Repeatability:</b>	Not Repeatable

## Description

Introduction to the tools and techniques used to create and perform electronic music in a variety of styles. Programming of virtual analog and digital synthesizers, developing techniques for recording unique instruments and sounds, creating custom single and multi-sample patches using software samplers, using algorithmic composition tools and techniques, building interactive performance systems using object-oriented programming environments, and adapting hardware and software for live performance.

## Course Objectives

The student will be able to:

- Program virtual analog and digital synthesizers.
- Record and implement sound elements using samplers.
- Understand fundamental principles of algorithmic composition.
- Design interactive performance systems.
- Create an original electronic music production with synthesizers and samplers.
- Adapt hardware and software for live performance.

## Course Content

- Fundamentals of synthesis
  - Virtual analog synthesis
  - Digital synthesis
- Working with samplers
  - Sample recording techniques
  - Creating single and multi-sample patches
- Working with drum machines
  - Basic drum programming
  - Arranging with drum patterns
  - The virtual drummer
- Principles of algorithmic composition
  - Mathematical models
  - Generative music
- Interactive performance systems
  - Music programming languages

- Object-oriented programming environments
- Live electronic music
  - Software tools
  - Alternate controllers

## Lab Content

- Synthesis with virtual instruments
  - Virtual analog
  - Digital (FM, physical modeling, granular, wavetable)
- Sampling with virtual instruments
  - Sound acquisition
  - Creating patches
- Drum programming with virtual instruments
  - Designing beats
  - Working with patterns
- Preparing for live performance
  - Mixing to stems
  - Creating a set

## Special Facilities and/or Equipment

- When taught on campus:
  - 30 Macintosh computers and MIDI keyboards.
  - Video projector and screen.
  - Digital audio workstation software with appropriate virtual instrument plug-ins.
- When taught via Foothill Global Access:
  - On-going access to computer with email software and capabilities.
  - An email address.
  - JavaScript enabled internet browsing software.

## Method(s) of Evaluation

Methods of Evaluation may include but are not limited to the following:

- Graded lab assignments in the operation of virtual synthesizers, samplers, and drum machines
- Quizzes on electronic music concepts and terminology
- Composition projects requiring application of concepts presented in each module
- A graded final project that demonstrates acquired skill in producing and performing electronic music

## Method(s) of Instruction

Methods of Instruction may include but are not limited to the following:

- Lecture presentations and classroom discussion of the techniques for composing and producing electronic music
- In-class listening to historically significant electronic music compositions followed by instructor-guided interpretation and analysis
- Presentations of major composition and production projects followed by in-class discussion and evaluation

## Representative Text(s) and Other Materials

Written materials provided by the instructor may include: lecture handouts, hardware and software user guides, guided listening worksheets, and musical scores.

## **Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments**

A. Written critiques and analyses of audio production projects including albums, soundtracks, television, video games and internet multimedia.

B. Written summaries documenting technical and artistic elements for corresponding submitted assignments and audio projects.

C. Written proposals, session logs, learning outcomes and reflections supporting submitted musical works and final master recordings.

## **Discipline(s)**

Commercial Music