

**Course title:** MULTIMEDIA ENGINEERING

**Course code:** 19016502

**Year/term:** Year 3/term 2

**Credit points:** 3

**Contact time:** 3-hour lecture

**Prerequisite:** Sound recording 1

**Online teaching platform:** Google Meet

**Lecturer and student contact via:** Google classroom

### **Course Learning Outcomes**

C1. The course provides an in-depth study of various audio programming primitives as well as introducing multiple implementations. Programming languages such as MAX/MSP and SuperCollider creates the foundation of this course. Students will acquire fundamental programming skills and theoretical background necessary to formulate a clear approach to incorporating programming concepts and practices appropriate to their own creative output. Projects will constitute on compositions student makes and projects will be evaluated according to the concert will be hosted showcasing the projects. The course built around electronic music with historical background information. The students considering taking this class must be interested in electronic music.

### **Generic learning outcome**

- G1. students are able to communicate and speak well in public
- G2. students are responsible for all assigned work on time
- G3. students are able to work as team.
- G4. students can use their knowledge to analyse, develop and create their own work.
- G5. students have life-long learning skill.
- G6. students has a good skill in English communication, especially, the technical communication relates to sound and acoustic engineering

### Learning & Teaching Activities

Teaching activities	Learning outcome	Remarks
Lecture	C1	Every week

### Assessment

Name	%	Learning outcome	Remarks
Class participation	15	-	-
Weekly projects	35	C1,G4,G2,G6	-
Midterm exam	25	C1	-
Final project	30	C1,G4,G2,G6	-

### Feedback

Activities	Remarks
Answer Assignment	Every other week
Announce Midterm score	Week 8

## Time table

Week no.	Lecture topics
1	Introduction to electronic music history 1
2	Introduction to electronic music history 2
3	Introduction to electronic music history 3
4	Introduction to electronic music history 4
5	Introduction to sonic arts
6	Max basics: Interface, data types, signal chains, delay lines
7	Basic synthesis techniques: Additive, subtractive, modular, wavetable and FM synthesis, simple polyphony
8	Sampling and looping: Sampling buffering audio, live looping, circular buffers
9	Granular synthesis
10	Network performance: MIDI and OSC
11	TidalCycles and Orca: Code based sequencing techniques and Algorave
12	Generative systems
13	Multichannel audio techniques
14	Individual meetings to help with final projects
15	Final project