VA336/546 – Interactive Sound

Instructor: Selçuk ARTUT, Ph.D. in Media Communications
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Class Hours: 9:40 am - 12:30 pm Wednesdays

Course Description
This course focuses on the use of interactive sound for creative applications. Topics include applied programming for live sound analysis, synthesis and processing, and the use of external devices to control live computer-based sound performances.

Course Objectives
Interactive Sound Projects, Programming for Audio, Sound Synthesis projects will be the focus of this course. This course deals with learning how to use several programming environments including Max/MSP/Jitter by Cycling 74 to create interactive environments with MIDI (Max), real-time audio processing (MSP), and real-time graphics and video processing (Jitter). Students will create several projects in the class, occasional group critiques will be given.

Textbook: Reference Books and supplementary notes will be provided

Topics included
Sound Synthesis
Sampling
AV programming
Live Coding for Music Performance
Every week another sound artist/project
Interfacing with MIDI

Sound equipment: Computer recording and editing software (DAWs), computers, headphones

Software Recommended (Not limited to): Reaper, Sony Acid Pro, Audacity, Ableton Live, Pro Tools, Cubase, Apple Logic, Soundforge, MaxMSP, PureData, p5, Sonic Pi, Tidal

Grading Policy: 40% Final Project + 50% Assignments + 10% Attendance and Participation

Weekly Schedule Tentative

Important: Students are required to read the articles prior to the class attendance!!!

Week 1: Introduction, Course Objectives, Students' Expectations [02.03.2022]

Course Objectives, Description, Introducing the Roadmap

Week 2: Node Based Programming
[09.03.2022]

Orienting the Development Platform MaxMSP/Jitter
Basics of synthesizers

Week 3: Synthesizers
[16.03.2022]

Synthesizers in the Movies (BBC)

Week 4: Sound Synthesis Methods
[23.03.2022]

Building a digital subtractive synthesizer

Week 5: Sound Synthesis Methods - Sampling
[30.03.2022]

Building a digital additive synthesizer
Sampling / Looping / Buffer

Week 6: Sequencing
[06.04.2022]

Sequencing

Week 7:
[13.04.2022]

Week 8: MIDI
[20.04.2022]

Performing with peripheral equipments

Week 9: Audio/Visual Programming
[27.04.2022]

Jitter Environment

Week 10: (No Classes, National Holiday) Network Programming
[04.05.2022]

OSC – open sound protocol

Week 11: Advanced Programming
[11.05.2022]

Supercollider

Week 12: Advanced Programming [18.05.2022]

Supercollider

Week 13: Live Coding [25.05.2022]

Sonic Pi

Week 14: Final Projects [01.06.2022]

Course Policies

Students are expected to

- come to class on time.
- be attentive and engaged in class.
- spend an adequate amount of time on the homework each week, making an effort to solve and understand each problem.
- engage with both the abstract and computational sides of the material.
- seek help when appropriate.

Plagiarism means using words, ideas, or arguments from another person or source without citation. Cite all sources consulted to any extent (including material from the internet), whether or not assigned and whether or not quoted directly.
Any form of cheating will immediately earn you a failing grade for the entire course.

Course content, requirements and policies are subject to change at the discretion of the instructor