

**Western University
Don Wright Faculty of Music**

MU9533b/9633b Electroacoustic Composition and Performance, 2022

Course Description

A graduate level course in electroacoustic musical composition. Students will compose music employing techniques of synthesis (such as analogue, digital, modular, simulated modular, granular...), sampling and data manipulation. Live performance/improvisation and real-time digital sound processing (DSP) will be integral elements in their compositional work. Meetings will be in person unless it is mandated that classes go online.

Lecture Hours: Mondays 10:30 am – 11:30 am; Wednesday 10:30 am – 12:30 pm

Tutorials: Rashaan Allwood, the CEARP GTA, will be available for weekly tutorials,
Time TBA

In-person meetings: CEARP Studios, TC 344b, TC344c

Online meetings (if any): via Zoom

Prerequisites

“Please note that prerequisites are no longer automatically checked prior to course registration. It is the responsibility of each student to ensure that he or she has the specified prerequisites. Unless you have either the requisites for this course or written special permission from your Dean to enroll in it, you will be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.”

Instructor Information

Instructor:

Dr. Paul Frehner
Rm. TC 339
Phone: 661-2111 ext. 85335
Email: pfrehner@uwo.ca
Office hours: by appointment

Studio Assistant:

Rashaan Allwood, rallwood@uwo.ca

Studio Manager & Media Specialist

Mike Godwin mgodwin@uwo.ca x85390

Learning Outcomes

Upon completion of the course students can expect to have:

- Broadened their knowledge of various types of synthesis such as subtractive synthesis, additive synthesis, FM synthesis
- Developed the knowledge and skill required to patch in Max/MSP for the purpose of composing electroacoustic works.

- Developed a basic level of competency in using either VCV Rack or the studio's Eurorack synth for composing generative or improvisational works
- Developed their improvisational skills by collaborating on structured electroacoustic/electronic improvisations.
- Gained a broader knowledge of current composers and trends in various electroacoustic genres
- Achieved a level of technical fluency in utilizing the audio hardware available in CEARP Studios B and/or C.*
- Gained hands-on experience in all aspects of staging a concert of electroacoustic music.*

**These realization of these two learning outcomes may be negatively affected by the ongoing Covid-19 situation.*

Course Activities and Timetable of Assigned Work

This primary focus of this course will be directed toward the creation and performance of electroacoustic/electronic musical works. Ideally, we will make use of the hardware and software resources of CEARP Studios B and C. However, due to the volatile Covid-19 situation access to the studios may be restricted, thus forcing a large part of the course's activities to take place online. This would require students to use their own digital audio resources. At the time of the preparation of this course outline Covid-19 guidance from the university regarding the Winter 2022 semester is unclear, making it thus necessary to prepare to be flexible in terms of delivering course content.

In the first half of the semester technical studies and creative sketches will be assigned on a weekly basis. Following this period students will work on an oral presentation and a final composition project.

It is understood that students are expected to engage in technical research for their creative work. The possibilities for this research are wide ranging and the exact nature of the research will be narrowed down through discussion during class time. Students are expected to be self-directed and exploratory in their technical research with the goal that they will have stretched their limits through this technical and creative process.

Course activities may consist of:

- Lectures and demonstrations on using the audio gear in CEARP Studio C
- Lectures and demonstrations on patching and programming in Max/MSP
- Lectures and demonstrations on patching and programming in VCV Rack
- Lectures on topics, terminology and concepts related to electronic music
- Soldering cables
- Tutorials with the GTA on any of the above topics
- Presentations and discussions of student creative work in a group composition lesson setting.
- Live performance and improvisation of electroacoustic sketches and compositions
- Discussion of any assigned readings or listenings

- listening to, analyzing and discussing recent electro-acoustic compositions by established composers as well as other types of audio artwork such as installations, sonic sculptures, etc...
- Composer Study Presentation: see below
- demonstrations by both the instructor and students on the use of various audio hardware devices and software applications
- Occasional private composition lessons. These would replace regular class time.

Studio Time

Providing we have permission to meet in person each student will be able to reserve up to 5 hours of studio time per week through the online CEARP calendar on the OWL site. Students may have extra studio time on a first-come, first-serve basis, provided that the studio was previously unreserved. Studio time may be reserved no more than 1 week ahead of time.

Assignments

There will be five assignments in the first part of the semester with the following due dates: Jan. 19, 26, Feb. 2, 9, 16

Composer Study Presentation – March 9, 14, 16

Each student will prepare one Composer Study oral presentation. This presentation will focus on the body of works of a single composer who has worked extensively in the electroacoustic genre. These presentations should last approximately 40-45 minutes in duration. Further details about these presentations will be given in class.

Composition Project – due March 30

The final project will be a composition scored for 1+ performer(s) and electronics with duration of between 6-10 minutes. Exact details regarding this project will be established through in-class discussion. This composition will be performed in the year-end concert, Covid-19 permitting, on April 5. An in-class run-through will take place the week before on March 30.

Year-End Concert – Tuesday April 5, 7:00 pm

The final concert is scheduled to take place on Tuesday, April 5, at 7:00 pm in Paul Davenport Theatre. Students will perform/present their compositions during this concert. Students will be responsible for promoting this event. In addition, each student is expected to assist in the setup, sound check, dress rehearsal and striking of the stage after the concert. These activities will take up the entire day from 8:30 am until approximately 10 pm.

However, if the concert cannot proceed due to the pandemic students will present their final compositions in the final class of the term on April 6.

Evaluation

<u>Final Composition Project</u> : *, **	40%
<u>Composer Study Presentation</u> :	20%
<u>Assignments, Preparation</u> :	30%
<u>Participation</u> : in-class discussion and completing any assigned readings and listening	10%

*N.B. Students will prepare their Final Composition Project for a premiere performance that will take place either in the year-end concert or during the final class. This performance/presentation will comprise part of the grade for the Final Composition Project.

**Note that along with both composition/creative projects students will also submit a bound performance or listening score that contains technical details regarding the signal processing and data manipulation employed.

The following elements will be considered when grading the assignments, collaborative improvisation and the final composition project.

Effective technical use of the audio gear/audio software employed

Demonstrated understanding and implementation of techniques related to DSP, various approaches to synthesis, patching in Max/MSP, MIDI, mixing, sequencing, sampling etc...

The overall success of the completed works with regard to compositional considerations such as creativity and originality, form, dynamic shape, sonority etc...

Required Course Materials

Hardware

Personal computer
Headphones

Software

Max/MSP – a personal license of the software. A student or monthly license can be purchased from Cycling74's online shop.

<https://cycling74.com/shop>

VCV Rack 2 – you are required to open a personal account for this open-source virtual modular synthesizer and then download the app.

There is no fee for downloading the free version of this application onto your computer. Once an account is set up you can then proceed to download modules from the VCV Rack Library. Most modules are free, however, there are some commercial modules that must be paid for. For this course you will not be required to purchase any commercial modules. Of course, you can if you wish.

<https://vcvrack.com/Rack>

N.B. There is a premium version of Rack 2 which has a cost of \$149 USD. For our purposes the free version is suitable enough.

Suggested Course Materials

Hardware

An audio interface
Microphone
MIDI keyboard
MIDI controllers

Software

A digital audio workstation (DAW) such as Pro Tools, Logic, Cubase etc...
A variety of VST plugins could be useful

Reference Texts

Max/MSP/Jitter Tutorials, Help files and Reference: integrated into the application

VCV Rack user manual – online

Other manuals for 3rd party VCV modules

Specific texts or articles as assigned

Samuel Pellman, *An introduction to the Creation of Electroacoustic Music*, Wadsworth Publishing Company ISBN 0-534-21450-9.

Scott Wilson, David Cottle, Nick Collins, *The SuperCollider book*, Cambridge Mass.: MIT Press, c2011.

David Miles Huber, Miles E. Runstein, *Modern Recording Techniques*, 4th ed., Boston, Focal Press, c1997.

Other hardware and software user manuals are available on the Mac Pro in the CEARP studio. They are mostly all available for download from their respective manufacturer's website. Hardcopies of some of these manuals are kept in the studio.

Recording Media and Storage

Students are expected to make frequent backup copies of any work stored on the studio computer or on their personal computer. The University and the instructor will not be responsible for loss of data and student work.

Logbook

The studio has a logbook. Students are expected to sign the logbook whenever using the studio. If there is a software or hardware malfunction they should describe the issue in general terms in the logbook and then notify the studio's Graduate Assistant.

Electronic Devices

The use of mobile phones or other electronic communications device in class is prohibited. Please turn off your communications devices before entering the classroom.

Statement on Accommodation for Medical Illness

The Graduate Program in Music recognizes that a student's ability to meet his/her academic responsibilities may, on occasion, be impaired by physical or mental illness. Illness may be acute (short term), or it may be chronic (long term), or chronic with acute episodes. The Graduate Program in Music further recognizes that physical or mental illness situations are deeply personal, and respects the need for privacy and confidentiality in these matters. In order to ensure fairness and consistency for all students, academic accommodation for work representing 10% or more of the student's overall grade in the course shall be granted only in those cases where there is documentation indicating that the student was seriously affected by illness and could not reasonably be expected to meet his/her academic responsibilities.

Documentation shall be submitted, as soon as possible, to the office of the Associate Dean (Graduate Studies), not to the course instructor.

Students with special learning needs or other circumstances are asked to inform the instructor as soon as possible so that necessary accommodations can be considered.

This policy can be found at www.studentservices.uwo.ca/secure/index.cfm.

Accommodation for documented medical absences will be considered for work worth less than 10% of the final mark. This work must be completed before the last day of classes in the Winter 2022 term.

Statement on Academic Offences

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, as found at www.uwo.ca/univsec/handbook/appeals/scholoff.pdf.

Statement on Health and Wellness

As part of a successful graduate student experience at Western, we encourage students to make their health and wellness a priority. Western provides several on-campus health-related services to help students achieve optimum health and engage in healthy living while pursuing a graduate degree. Students seeking help regarding mental health concerns are advised to speak to someone in whom they feel comfortable confiding, such as a faculty supervisor, a program advisor, or the Associate Dean (Graduate Studies). Campus mental health resources may be found at http://www.health.uwo.ca/mental_health/resources.html.”

Statement on Attendance

Attendance is mandatory for this course. If a student's attendance is considered inadequate by the instructor, the decision to bar the student from taking a written or oral examination or submitting an equivalent final project for grade assessment rests with the Dean, on the recommendation of the Department.

Statement on Netiquette

Keep in mind the different cultural and linguistic backgrounds of the students in the course.

Be courteous toward the instructor, your colleagues, and authors whose work you are discussing.

Be respectful of the diversity of viewpoints that you will encounter in the class and in your readings. The exchange of diverse ideas and opinions is part of the scholarly environment. “Flaming” is never appropriate.

Be professional and scholarly in all online postings. Use proper grammar and spelling. Cite the ideas of other appropriately.