

University of Waterloo, Conrad Grebel University College

Music275 – Music & Technology, Fall 2018

Instructor:	Cam McKittrick (email: c.mckittrick@icloud.com)
Class time:	Tuesdays 4-6:50pm
Location:	Conrad Grebel College, Room 1208
Office hours:	Tuesdays 3:30-4 and after 7pm by appointment

Course Description

This course is a hands-on introduction to the core concepts of music production using current technology. Students will learn about recording, audio editing, digital signal processing, and MIDI, and will integrate these skills in the creation of original pieces of music. Class and lab instruction will be complemented by individual work in the Conrad Grebel Digital Music Lab. In-class and out-of-class repertoire review will provide historical and aesthetic context for your own work.

Materials

There is an \$80.00 lab fee and a refundable \$25.00 deposit for a key to the studio – the paperwork for obtaining a key will be handed out on the first day of class.

Use dependable external storage to backup your work (two backups recommended). If you happen you use USB thumb drives, don't work with the software from the thumb drive—instead copy your project folder to the computer and work there. I recommend you save a new copy of your project after each session (simply add the date to the title).

Other Materials

1. Access to a personal computer on which you are able to install software. A current laptop is recommended to follow in-class demonstrations, but a residence desktop computer will be fine. Following success on the mid-term online test, the Electronic Music Studio can be used for class work and extending your own resources.
2. Backup and portable digital storage (USB thumb drive for course materials, cloud or external backup for your computer's main storage in entirety).
3. Digital audio and MIDI software

A limited list of software that is open-source and offered without cost will be required to be installed on your personal computer.

A pair of good-quality headphones for work at home and in class:

Good-quality headphones are needed for doing any kind of detailed audio work or critical

listening in our course if you want to work outside of the lab. Highly recommended brands include AKG, Sennheiser, and AudioTechnica. 'In-ear' type headphones (such as iPod 'ear-buds') are OK but do pose a significant risk of hearing damage when used at high volume levels as a response to environmental noise. Bring your headphones to each class meeting.

Recommended Materials:

1. Hosken, Dan; *Music Technology and the Project Studio*; ISBN 9780415997232. Published by: Routledge, 2012
2. *Ableton Live Intro* (or Studio or Suite) through ableton.com
 - *Live Intro* is available for \$99 and will allow you to complete many of your assignments but also offer a more fruitful understanding of in-class demonstrations. Cracked/illegal copies of the software cannot be used

Materials Note: All lab assignments can be completed in the Conrad Grebel College Digital Music Lab: Optionally, if you own the software used in the Lab, you may complete some assignments using your personal computer at your own cost and maintenance. To do so you must ensure your assignment opens and runs successfully in the Lab before submission. ***Regardless, all students pay the required lab fee.***

Important note regarding Lab Hours: The Lab closes when the building closes (10pm). Please make sure you leave before that time.

Evaluation:

Individual Assignments (4): **40%**

Each Assignment addresses specific techniques and culminates by using those techniques to build a short creative work.

Creative Projects (2) 15% and 20%: **35%**

Open assignments in which you demonstrate course learning. The nature and duration of the work is up to you. Time for individual guidance from the instructor is provided.

Rudiments Test: **15%**

An online test based on lectures and recommended readings.

Presentation of Assignment(s): **10%**

You are required to prepare completed assignment material for presentation to the class with the goal of demonstrating how you used and extended course techniques in the creative portion of your assignment.

Topics to be covered:

1. Acoustics and listening
2. Digital file formats
3. Audio recording and microphones
4. Managing signal path
5. Sound reproduction
6. MIDI
7. Samplers/synthesizers
8. Signal processing
9. Aesthetic considerations and composition
10. Performance concerns using newer technology
11. Historical context

Computer music hardware and software will be studied from both theoretical and practical points of view. Our study will be reinforced through practical application and listening.

A course listening list will partially be drawn from volumes 1-4 of *"The Anthology of Noise and Electronic Music,"* available on reserve in the Conrad Grebel Library, and other recordings. Other details concerning the assignments, quizzes, and projects will be covered in class and are available from the WATERLOO LEARN course site in written form.

Attendance & Late Work

Attendance for this class is very important, due to the amount of material to cover and the fact that we meet only once a week. Missing a class will leave you significantly behind in relation to everyone else and may also hinder your ability to complete the term assignments. While there is no attendance mark in the grading scheme, late assignments will receive a 10% per day deduction at the discretion of the instructor.

Academic Integrity: In order to maintain a culture of [academic integrity](#), members of the University of Waterloo are expected to promote honesty, trust, fairness, respect and responsibility.

Discipline: A student is expected to know what constitutes academic integrity, to avoid committing academic offences, and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offence, or who needs help in learning how to avoid offences (e.g., plagiarism, cheating) or about "rules" for group work/collaboration should seek guidance from the course professor, academic advisor, or the Undergraduate Associate Dean. When misconduct has been found to have occurred, disciplinary penalties will be imposed under Policy 71 – Student Discipline. For information on categories of offenses and types of penalties, students should refer to Policy 71 - [Student Discipline](#).

Grievance: A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read Policy 70 - [Student Petitions and Grievances](#), Section 4.

AccessAbility Services: [Website](#).