McMaster University
Communication Studies and Multimedia
MMEDIA 3C03/MUSIC 3Z03 – Interactive and Spatial Audio
Course Outline – Winter 2018

Class meeting time: Mondays 2:30 – 5:20 PM (TSH-203 and TSH-202BB/BC)
Instructor: Dr. David Ogborn, x27603, ogbornd@mcmaster.ca
Open Studio Hours: TBD @ ESP Studio (TSH-208)
Office Hours: Mondays 1-2 PM (TSH-306)
Online course content: http://avenue.mcmaster.ca

Course description:
This course covers the creation and delivery of interactive and spatial audio. Projects explore surround and multichannel sound, interactive sound design, software synthesis, and other advanced electroacoustic techniques. Students will build on skills developed in other Multimedia courses, with readings, miniatures and creative projects that emphasize the spatial and interactive dimensions of sound art and audio communications.

Course materials:
Students are required to own a studio-grade pair of headphones (circumaural, closed design, without active noise cancellation) and a large, fast portable hard drive. These will be used not only for this course but also for numerous other courses in the Multimedia program.

Required Texts:
There are no required texts. Reading and listening materials in support of class topics will be made available through the course's Avenue-To-Learn page and/or McMaster library or open-access online offerings, as the course progresses.

Software:
Students will use a variety of software, including Reaper, Max, Pure Data and SuperCollider. Ownership of software is not required as it can be used in the Multimedia wing. However, students may (optionally) wish to purchase Max for work away from the university – affordable 9-month student authorizations and permanent student licenses are available through cycling74.com, and a permanent license for Reaper is also highly affordable. Pure Data and SuperCollider are freely available as open-source software for multiple platforms.

Evaluation:
20% Participation, Engagement, and Reflection
20% Multichannel Audio Composition (due Friday Feb 9)
20% Interpretive Essay (due Friday Mar 9)
40% Term Project (due Monday April 16)
(100% Total)

Participation, Engagement, Reflection:
The mark for this component of the course is earned by attending lectures and lab sessions, by submitting lab results and/or reflections on lab activities (when required), and by completing reflections on required readings. One point is potentially available upon completion of each activity, and the final mark out of 20 is formed by dividing the points earned by the maximum possible number of points, then multiplying by 20. It may occasionally be necessary to award a half-point for an activity when
major improvements (for example, to demonstrated effort, to following instructions, etc) are necessary. Generally, however, the full point (1/1) will be awarded for engaged completion of a given activity. The instructor, in their sole discretion, may choose to award extra points in cases of consistently strong contributions to the learning environment. Some further notes about specific types of activity follow:

- Attendance: Attendance will be polled and points awarded at random times. Not every meeting will necessarily involve a poll for attendance (although many will). That being said, attendance is a basic expectation of the class.
- Lab Activities: Each class meeting involves being guided through one or more practical tasks in the lab. At the end of these sessions, you may be asked to submit the results of your work, a reflection on the work, or both. You are strongly encouraged to use these activities as preparation for the conceptualization and framing of your term project in the course. After Friday of the week in which a meeting takes place, all of these lab activities will no longer be eligible for credit, without exception.
- Reading: A series of carefully chosen reading assignments from audio research literature runs through the course. After and for each of these reading items, you will complete a short reflective quiz that asks for a moderate-length prose answer (generally of a reflective or metacognitive nature). You are strongly encouraged to use the readings and associated quizzes as preparation for the course’ final project. In order to be eligible for credit, reading quizzes must be completed by ten minutes before the following lecture in the course schedule, without exception.

**Multichannel Audio Composition, Interpretive Essay and Term Project:**
Detailed descriptions of these three larger projects to be completed during the term will be posted to Avenue-to-Learn, together with the rubrics used to determine grades. All creative projects are to be handed in electronically through Avenue-to-Learn. You are strongly encouraged to begin working on projects well in advance of their due dates.

**Late policy:**
Late work will be subject to a penalty of 5% per day (or partial day) of the week (including weekends). Extensions for late work will be granted only upon the recommendation of a student's home faculty – please take such requests directly to your home faculty's office.

**Open Studio:**
All students in audio courses are welcome to drop in to the Multimedia program’s surround sound studio (TSH-208) during the optional Open Studio hours each week. During the Open Studio hours the instructor and/or teaching assistant will be there to help with any technical or creative questions that come up, and we’ll also experiment with sound together.

**Basic Needs Security:**
Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to notify the instructor, if they are comfortable in doing so. This will enable him to provide any resources that he may possess.
Course Schedule:

Week 1 (Jan 8) Lecture & Lab: Introduction and Overview


Week 2 (Jan 15) Lecture & Lab: Multi-channel configurations, mixing and delivery


Week 3 (Jan 22) Lecture & Lab: Multi-channel synthesis and transformation


Week 4 (Jan 29) Lecture & Lab: Controllerism & MIDI, Simple Mapping


Week 5 (Feb 5) Lecture & Lab: Generative Music


*Multichannel Audio Composition due Friday Feb 9*

Week 6 (Feb 12) Lecture & Lab: Open Sound Control, Networking, Interactive Visuals


(note that actual reading starts part way into the PDF linked here)

Week 7 (Feb 26) Lecture & Lab: New Interfaces for Musical Expression, Complex Mapping


Week 8 (Mar 5) Lecture & Lab: Live Coding, Circuit Bending, Sonification/Auditory Display


*Interpretive Essay due Friday Mar 9*

Week 9 (Mar 12) Lecture & Lab: Term Project ideation & discussion, research & careers in audio

Week 10 (Mar 19): Collective, supervised work on term projects in lab

Week 11(Mar 26): Collective, supervised work on term projects in lab

Week 12 (Apr 2): Presentation of work in progress in black box theatre

*Term Project due Monday April 16*

Potential presentation/performace of term projects in Imaginary Landscapes concerts during exam period

*** Please Note the Following Policies and Statements ***

**Academic Dishonesty**

You are expected to exhibit honesty and use ethical behaviour in all aspects of the learning process. Academic credentials you earn are rooted in principles of honesty and academic integrity.

Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. This behaviour can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: "Grade of F assigned for academic dishonesty"), and/or suspension or expulsion from the university.

It is your responsibility to understand what constitutes academic dishonesty. For information on the various types of academic dishonesty please refer to the Academic Integrity Policy, located at www.mcmaster.ca/academicintegrity

The following illustrates only three forms of academic dishonesty:

- Plagiarism, e.g. the submission of work that is not one’s own or for which other credit has been obtained.
- Improper collaboration in group work.
- Copying or using unauthorized aids in tests and examinations.
Email correspondence policy

It is the policy of the Faculty of Humanities that all email communication sent from students to instructors (including TAs), and from students to staff, must originate from each student’s own McMaster University email account. This policy protects confidentiality and confirms the identity of the student. Instructors will delete emails that do not originate from a McMaster email account.

Modification of course outlines

The University reserves the right to change dates and/or deadlines etc. for any or all courses in the case of an emergency situation or labour disruption or civil unrest/disobedience, etc. If a modification becomes necessary, reasonable notice and communication with the students will be given with an explanation and the opportunity to comment on changes. Any significant changes should be made in consultation with the Department Chair.

McMaster Student Absence Form (MSAF)

In the event of an absence for medical or other reasons, students should review and follow the Academic Regulation in the Undergraduate Calendar Requests for Relief for Missed Academic Term Work. Please note these regulations have changed beginning Fall 2015. You can find information at mcmaster.ca/msaf/. If you have any questions about the MSAF, please contact your Associate Dean's office.

Academic Accommodation of Students with Disabilities

Students who require academic accommodation must contact Student Accessibility Services (SAS) to make arrangements with a Program Coordinator. Academic accommodations must be arranged for each term of study. Student Accessibility Services can be contacted by phone 905-525-9140 ext. 28652 or e-mail sas@mcmaster.ca. For further information, consult McMaster University's Policy for Academic Accommodation of Students with Disabilities.

Academic Accommodation for Religious, Indigenous and Spiritual Observances

Students requiring academic accommodation based on religion and spiritual observances should follow the procedures set out in the Course Calendar or by their respective Faculty. In most cases, the student should contact his or her professor or academic advisor as soon as possible to arrange accommodations for classes, assignments, tests and examinations that might be affected by a religious holiday or spiritual observance.