

# MUCP 5690 Topics in Electroacoustic Music: Performing Electroacoustic Music Spring 2019

Time and place: TuTh 9:30 - 10:50, MU 1001  
Instructors: Andrew May and Elizabeth McNutt  
Office: MU 1003 (May), MU 2013 (McNutt)  
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Office hours: by appointment  
Final: Thursday, May 9, 8:00 a.m. - 10:00 a.m.  
Prerequisite: MUCP 5680 or consent of instructor

## Course Description

### Overview

Students in this seminar will learn the theory and practice of live electroacoustic performance systems; develop knowledge of the repertoire of works for live performance with technology through research; and develop skills through practical exercises and projects. Final projects will be collaborative performances of either new works or works from the repertoire, in which students will engage as instrumentalists, vocalists, technologists, improvisers, and/or composers; students will collaborate on projects, learning with and from each other, and each student will be encouraged to acquire a breadth of experience by taking on multiple roles.

This class will *not* teach students how to program interactive computer music, though simple patch editing will be involved in some homework assignments. Performers enrolled in the class are not required to have prior knowledge of interactive computer music systems. Students wishing to develop new compositions or improvisation environments as final projects should rely on already-developed skills in this area.

### Materials

- portable USB drives and/or cloud storage to back up your work
- an access card for CEMI studio 2008; you are encouraged to use the studio extensively, as it has many advantages over home systems
- you may optionally purchase Cycling '74's Max software (<http://www.cycling74.com>) for use on your own computer; it is not required
- online resources, updated each week, at <http://andrewmaymusic.com/Teaching/5690> will include a password-protected library of reading materials, recordings, scores, and software for works under discussion

### Textbooks and Resources

There will be no required textbook; readings will be available online or in the library.

### Class Themes

Why do musicians use electronic systems for performance?  
What are the opportunities and limitations of available technologies?  
What musical relationships are possible/implicit in electroacoustic music systems?  
What musical possibilities are explored in repertoire? What are unexplored?  
What makes for reliability in performance? What makes for interesting variability?  
What are the connections between user interface design, DSP design (sampling, synthesis, processing, spatialization, etc), scheduling and synchronization design, and musical experience in

composition, improvisation, and performance?

### **Classes and Assignments**

Reading and/or practicum assignments will be given regularly. Tuesday's classes will generally focus on theory and repertoire, Thursday's on practice and techniques.

This is a collaborative art, and most assignments and projects will involve some degree of collaboration with other class members. Make sure to be respectful, patient, and courteous with your colleagues; you should expect that they have many insights to share and skills to teach from their musical experience. Engage strongly in these collaborations! If you require technical assistance for a project and cannot find a collaborator in the class, alert the instructors and they will try to pair you with one of the CEMI staff.

A midterm project will be assigned, focusing on a work of live electroacoustic music repertoire. Your goal will be to get materials or a work of existing repertoire, get it working, and do an in-class read-through of a portion of the work. The midterm will also include a brief written essay documenting your reasons for choosing the work, its technical requirements and materials, the challenges it presented technologically and musically, and how you approached them. The essay will be due at the same time as the mid-term project.

Final projects will be audiovisual documents of your collaborations in the class, either on performances of pre-existing repertoire or works developed during the class. Final projects will be presented during the scheduled final exam time in the Merrill Ellis Intermedia Theater, unless the entire class agrees on an alternate date and time together. The final project will also include a 3-5 page written essay documenting the goals, challenges, techniques, features, collaborative experience, and results of the project. The essay will be due at the same time as the final project.

### **Course Policies**

#### **Grading**

|                                  |     |
|----------------------------------|-----|
| Readings and class participation | 30% |
| Practicum assignments            | 20% |
| Midterm project                  | 20% |
| Final projects and essays        | 30% |

#### **Attendance policy**

Attendance will be figured into your class participation grade. More importantly, this course will move fast; you will become *very confused* if you do not attend regularly. In case of 6 or more unexcused absences, the instructors reserve the right to summarily assign you a failing grade for the course. If you are unable to attend a class, inform the instructors in advance, as well as anyone you are collaborating with in the class. It is your responsibility to come to the office hours and/or communicate with your colleagues in the class to make up material missed.

### **ACADEMIC INTEGRITY**

Students caught cheating or plagiarizing will receive a "0" for that particular assignment or exam [or specify alternative sanction, such as course failure]. Additionally, the incident will be reported to the Dean of Students (Office of Academic Integrity), who may impose further penalty.

According to the UNT catalog, the term "cheating" includes, but is not limited to: a. use of any unauthorized assistance in taking quizzes, tests, or examinations; b. dependence upon the aid of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments; c. the acquisition, without permission, of tests or

other academic material belonging to a faculty or staff member of the university; d. dual submission of a paper or project, or resubmission of a paper or project to a different class without express permission from the instructor(s); or e. any other act designed to give a student an unfair advantage. The term “plagiarism” includes, but is not limited to: a. the knowing or negligent use by paraphrase or direct quotation of the published or unpublished work of another person without full and clear acknowledgment; and b. the knowing or negligent unacknowledged use of materials prepared by another person or agency engaged in the selling of term papers or other academic materials.

**LINK:** <http://vpaa.unt.edu/dcgcover/resources/integrity>

### **STUDENT BEHAVIOR**

Student behavior that interferes with an instructor’s ability to conduct a class or other students' opportunity to learn is unacceptable and disruptive and will not be tolerated in any instructional forum at UNT. Students engaging in unacceptable behavior will be directed to leave the classroom and the instructor may refer the student to the Dean of Students to consider whether the student's conduct violated the Code of Student Conduct. The university's expectations for student conduct apply to all instructional forums, including university and electronic classroom, labs, discussion groups, field trips, etc.

**LINK: Student Code of Conduct -** <https://deanofstudents.unt.edu/conduct>

### **ACCESS TO INFORMATION – EAGLE CONNECT**

Your access point for business and academic services at UNT occurs at my.unt.edu. All official communication from the university will be delivered to your Eagle Connect account. For more information, please visit the website that explains Eagle Connect.

**LINK:** [eagleconnect.unt.edu/](http://eagleconnect.unt.edu/)

### **ODA STATEMENT**

The University of North Texas makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide you with an accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request accommodations at any time, however, ODA notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information see the Office of Disability Accommodation.

**LINK:** <http://disability.unt.edu/> or Phone: (940) 565-4323

### **FINANCIAL AID AND SATISFACTORY ACADEMIC PROGRESS**

#### Undergraduates

A student must maintain Satisfactory Academic Progress (SAP) to continue to receive financial aid. Students must maintain a minimum 2.0 cumulative GPA in addition to successfully completing a required number of credit hours based on total hours registered. Students cannot exceed attempted credit hours above 150% of their required degree plan. If a student does not maintain the required standards, the student may lose their financial aid eligibility. Students holding music scholarships must maintain a minimum 2.5 overall cumulative GPA and 3.0

cumulative GPA in music courses.

If at any point you consider dropping this or any other course, please be advised that the decision to do so may have the potential to affect your current and future financial aid eligibility. It is recommended that you to schedule a meeting with an academic advisor in your college or visit the Student Financial Aid and Scholarships office to discuss dropping a course being doing so.

### Graduates

A student must maintain Satisfactory Academic Progress (SAP) to continue to receive financial aid. Students must maintain a minimum 3.0 cumulative GPA in addition to successfully completing a required number of credit hours based on total registered hours per term. Music scholarships require a 3.5 cumulative GPA. Students cannot exceed maximum timeframes established based on the published length of the graduate program. If a student does not maintain the required standards, the student may lose their financial aid eligibility.

If at any point you consider dropping this or any other course, please be advised that the decision to do so may have the potential to affect your current and future financial aid eligibility. It is recommended you schedule a meeting with an academic advisor in your college, an advisor in UNT-International or visit the Student Financial Aid and Scholarships office to discuss dropping a course.

**LINK: <http://financialaid.unt.edu/sap>**

### **RETENTION OF STUDENT RECORDS**

Student records pertaining to this course are maintained in a secure location by the instructor of record. All records such as exams, answer sheets (with keys), and written papers submitted during the duration of the course are kept for at least one calendar year after course completion. Course work completed via the Blackboard/Canvas online system, including grading information and comments, is also stored in a safe electronic environment for one year. You have a right to view your individual record; however, information about your records will not be divulged to other individuals without the proper written consent. You are encouraged to review the Public Information Policy and the Family Educational Rights and Privacy Act (FERPA) laws and the university's policy in accordance with those mandates.

**LINK: <http://ferpa.unt.edu/>**

### **COUNSELING AND TESTING**

UNT's Center for Counseling and Testing has an available counselor whose position includes 16 hours per week of dedicated service to students in the College of Music and the College of Visual Arts and Design. Please visit the Center's website for further information: <http://studentaffairs.unt.edu/counseling-and-testing-services>. For more information on mental health issues, please visit: <https://speakout.unt.edu>.

The counselor for music students is:  
Myriam Reynolds  
Chestnut Hall, Suite 311  
(940) 565-2741 [Myriam.reynolds@unt.edu](mailto:Myriam.reynolds@unt.edu)

### **ADD/DROP POLICY**

Please be reminded that dropping classes or failing to complete and pass registered hours may

make you ineligible for financial aid. In addition, if you drop below half-time employment you may be required to begin paying back your student loans. After the 12th class day, students must first submit a completed “Request to Drop” form to the Registrar’s Office. The last day for a student to drop a class in Spring with a W is April 1, 2018.

**LINK: <https://registrar.unt.edu/registration/spring-add-drop>**

### **Course Outline – *subject to modification!***

#### Week 1 (1/15, 1/17)

Goals and possibilities (assignment: annotated bibliography 1/24)  
Requirements, tools, and contexts of performance with live electronics

#### Week 2 (1/22, 1/24)

Overview of history and repertoire (assignment: “fantasy” performance environment 1/31)  
Approaches to synchronization and coordination between human and machine

#### Week 3 (1/29, 1/31)

Repertoire examples and listening analysis

#### Week 4 (2/5, 2/7)

Communicating with the machine: interface designs (assignment: “music box” solo 2/28)  
Controllers, audio analysis, microphones, mics, visual displays, user feedback  
*2/7 submit proposal for midterm project*

#### Week 5 (2/12, 2/14)

Temporal relations: event triggering, “parallel play,” cueing, and other established models  
Issues and approaches to “synchromorphology” - data acquisition, score tracking/following, etc.

#### Week 6 (2/19, 2/21)

Repertoire examples and listening analysis  
Perceiving and processing time - delay processing, live sampling/granulation, mimesis

#### Week 7 (2/26, 2/28)

Control, performance, instruments and meta-instruments  
Issues of user interface design - affordances, streamlining, clarity/distraction

#### Week 8 (3/5, 3/7)

Midterm project presentations  
Team forming for final projects  
*3/5: midterm project due*

#### Week 9 (3/19, 3/21)

Midterm project presentations  
Final project plans, terms, and strategies  
*3/21 submit formal proposals for final projects*

#### Week 10 (3/26, 3/28)

Ensemble issues in chamber music with electronics  
Repertoire examples

Week 11 (4/2, 4/4)

Setup, sound check, and rehearsal techniques  
Common performance issues and practical solutions

Week 12 (4/9, 4/11)

Uncertainty, indeterminacy, improvisation (assignment: gaussian controls due 4/23)  
Indeterminacy versus unreliability: how do you know? when should you care?

Week 13 (4/16, 4/18)

Equipment choices, technical riders, and good communication  
Acoustic factors, speaker placement, microphone techniques

Week 14 (4/23, 4/25)

Final project development: presentations and discussions

Week 15 (4/30, 5/2)

Final project documentation: in-class filming

Week 16 (finals week)

Final projects due  
Thursday, May 9, 8-10 am: official final exam time