University of South Carolina
School of Music

BAIN MUSC 540/(737)
(Advanced) Projects in Computer Music

SYLLABUS

Instructor
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Composition and Theory
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Office Hours: MWF 1-2 p.m., and by appointment

Course Information
Term: Spring 2022
Website: https://reginaldbain.com/vc/musc540/

Facilities
Computer Music Studio B: Music Building, R011
Experimental Music Studio (XMUSE): Music Building, R039

PROJECT PHASES

1. Planning
2. Research & Development
3. Project Execution
4. Presentation
5. Final Report

Course Description
Directed study in computer music composition or research. (Permission of instructor required.)

Prerequisite
MUSC 336 *Introduction to Computer Music*.

Learning Outcomes
Students will typically learn how to:

- Compose electronic music
- Work in a project studio environment
- Develop an individualized program of creative activity/research in consultation with the instructor
- Keep a journal of artistic/technical project considerations and developments
- Prepare an electronic composition for presentation in a concert
- Participate in the production of an electronic music concert (hall management, lighting, tech., publicity, etc.)
- Work in areas of specialization such as algorithmic composition, computer-aided composition, real-time interactive composition/performance, sonification, etc.
- Program sound using advanced environments for composition such as Max; Csound, OpenMusic, PureData, SuperCollider, etc., or programming languages such as Python, LISP, etc.
- Use communication protocols (MIDI, OSC, etc.) and hardware associated with music composition/performance
- Participate in a group program of creative activity/research
- Collaborate with students in other fields; e.g., scientists, filmmakers, visual artists, choreographers, etc.
- Prepare a final presentation
- Write a final report of activities
- Etc.

Required Texts, Hardware and Software
Required texts, hardware, software, and media will be discussed during the planning phase of the course and will be established at (or shortly after) the first project meeting. For most projects, the hardware and software necessary to execute a project will be available on the Computer Music Studio B computer. Students may also opt to execute projects using their own hardware and software.

Course Requirements

- This is NOT a traditional class with a fixed number of regular class meetings. Rather, it is a TBA class in which students are expected to attend 100% of a limited number of scheduled meetings, lectures, rehearsals, concerts, etc.
- Students must execute a *solo project* and *group project* as described below.
- Students taking the course for 3 credit hours are expected to spend on average 3-5 hours per week on course-related activities including reading, writing, composing, programming, editing, recording, planning, and doing research. Other important course activities include required orientation sessions, working in the studio, and attending meetings, lectures, rehearsals, and concerts.
- Solo and group project requirements will vary depending on the individual student's background (technological and artistic) and level of study (MUSC 540 or 737). Exact requirements will be established in writing during the planning phase of the course.
- *Students typically get as much out of a **directed study** as they put into it*. Success begins with 100% attendance. As such, you must make your instructor aware of any potential conflicts with the course activities listed below at the beginning of the term. Excused absences due to a previously scheduled class or professional conflict will be granted on a case-by-case basis at the beginning of the term. In the case of illness or emergency, be sure to inform the instructor of the situation via e-mail as soon as possible.

SOLO PROJECT

SOLO PROJECT PROPOSAL

Due: *Last day of classes, previous term*

During the previous semester's advisement/open registration period, prospective MUSC 540 students must submit a project proposal to the instructor. The proposal may take the form of an informal e-mail message (ca. 50-100 words). The instructor will evaluate the student's proposal and let the student know if the student is a good match for the course. Project acceptance is based on considerations such as the student's major,[1] performance in MUSC 336, technical background, merit of the project proposal, the project's appropriateness for execution in UofSC's computer music facilities, etc. The instructor will provide feedback regarding the feasibility of the proposed project and suggest alternative avenues for exploration as necessary. If the project is deemed acceptable, the instructor will help the student refine the proposal as necessary via an e-mail exchange. When the proposal is finished, the instructor will grant the student permission to register for the course via e-mail.

The ***solo project*** for BM, MM, and DMA composers will typically be an electronic composition. Compositions are typically executed using tools such as Logic, Live, Reason, etc.; Max, PureData, SuperCollider, OpenMusic, Csound, etc.; Audacity or ProTools; etc. All of these programs are available in Studio B. Students are highly encouraged to utilize free open source software, or software they already own, so they will have access to the tools and media after the course ends and can begin the process of building an advanced home studio. Students may also propose other types of computer-music related creative activity or research.

INITIAL MEETING: PROJECT PLAN DEVELOPMENT

Due: *First 2 full weeks of the term*

The student must schedule an initial meeting with the instructor via e-mail. This meeting should take place during the first two full weeks of the term. At the initial meeting, the student and instructor will work together to draft a provisional *solo project plan* for the semester. The plan will normally include the following sections: (1) a *research/creative activity statement*, (2) a *list of project goals*, (3) a description of the *project's significance and methodology*, (4) a *time frame for completion* of the project's components, and (5) a list *deliverable items* that will be completed by the end of the term (e.g., a live performance, a recording of a completed composition, software, etc.). Over the course of the next week, the student will refine the plan and prepare a ***project plan document*** (typed, double spaced) that includes the 5 sections listed above and e-mail it to the instructor as an attachment (.docx). With permission of the instructor, the solo project plan document may be amended over the course of the term. The requirements for the group project (see below) will also be discussed at this initial meeting.

[1] MUSC 540 is a required course for the BM Composition degree. MUSC 540 is also designed to fulfill the technology requirement in the MM & DMA Composition degrees.

REQUIRED SOLO PROJECT MEETINGS AND FINAL PROJECT PRESENTATION

All students must schedule and attend the following required solo project meetings: (1) the initial project plan development meeting in Weeks 1-2 discussed above; (2) a midterm project meeting in Weeks 6-9 where end-of-term deliverables are established; (3) a final project meeting in Weeks 12-14 where the student presents finished (or nearly finished) work to the instructor. The student is expected to maintain weekly contact with the instructor via e-mail (e.g., asking questions, sending brief status reports, etc.). The student is also expected to reply to all instructor e-mails in a timely fashion (i.e., within one or two business days). When the student is ready to share work in progress (e.g., has a significant amount of work to share for comment, requires help, reaches an impasse of any kind, etc.), the student should request a meeting with the instructor via e-mail. Depending on the type of solo project, attendance at concerts, rehearsals, concerts, group meetings, on-campus lectures, etc. may also be required. So the student will have time to fine-tune the project as per the instructor's suggestions during final exam week, all **final project meetings must take place on or before the last day of classes: Mon., April 25**. **All work for the course is due by Wed., May 4, at 12 noon**.

The instructor will remind the student to schedule the required meetings above (via e-mail). Once the reminder goes out, it is the student's responsibility to follow through on scheduling the appointment. Students must be prepared present completed work at the required meetings. Failure to follow through on the guidelines above will be factored into the student's grade.

GROUP PROJECT

MUTATIONAL MUSIC PROJECT

The group project for Spring 2022 will be an interdisciplinary collaboration with DUDYCHA BIOL 599 *Chords and Codons*. This unique beyond-the-classroom experience will focus on research/creative activity that lies at the intersections of *genetics* and *sonification*. It is part of the *Mutational Music Project*, the broader impact component of Dr. Jeff Dudycha's National Science Foundation (NSF) grant *Mutational variance of the transcriptome and the origins of phenotypic plasticity* (NSF award #1556645).

MUSC 540/737 and BIOL 599 students will team up to create mutational music projects. The scientific end of the project will be designed by the BIOL 599 students. MUSC 540/737 students will function as consultants on the musical/technical end of the project. Dr. Dudycha will direct the biologists in all matters of biology, and Dr. Bain will direct the biologists and composers in all matters of music technology. BIOL 599 meets MW 2:20-3:35 pm, in Coker Life Sciences (CLS), R202. The biology students are meeting on Mon. 1/10, Wed. 1/12, Wed. 1/19, Mon. 1/24, Wed. 1/26 & Mon. 1/31 to attend introductory lectures designed to help them develop project ideas. Interested composers may attend these lectures, but attendance is not required. **The biologists and composers will come together for the first time on**:

FIRST GROUP MEETING (MEET THE BIOLOGISTS)
Wed., Feb. 2, 2:20-3:35 pm
Coker Life Science (CLS), Room 202

Please reserve this time (Wed., Feb. 2, 2:20-3:35 pm) in your schedule. The other group meetings will take place later in the term at mutually convenient times for all group members. The biologists will make their final presentations on Wed., April 20, or Mon., April 25. Your project will be presented on one of these two days.

CLASS-PRODUCED CONCERT

You are also required to participate in the production of the following concert:

UofSC COMPUTER MUSIC CONCERT
Sun., April 24, 2022
School of Music, Recital Hall, 7:30 pm
(Setup begins at 4:30 pm, Tear down takes place from 8:30-9 pm.)

Please reserve this time (Sun., April 24, 4:30-9:00 pm) in your schedule. If you have a conflict with this date/time, you must let the instructor know about it at the initial project meeting. Students will participate in the concert's production in one of the following ways: (1) compose a work for the concert, (2) perform a work on the concert, or (3) assist with the concert's production: e.g., equipment setup, lighting, sound, hall management, publicity, etc. Setup and soundchecks for the concert take place from 4:30-7 pm. Tear-down will take place from 8:30-9 pm.

FINAL REPORT AND OTHER DELIVERABLES
Due: Wed., May 4, at noon in Blackboard

FINAL REPORT AND DELIVERABLES SUBMISSION GUIDELINES
Whereas the first half of the term normally focuses on reading, compositional planning/sketching, composing, tutorials, programming, research, and the like, the second half of the term normally focuses on the execution and presentation of the project. In lieu of a public performance, students composing an electroacoustic composition may submit the completed composition as a .wav file in Blackboard, along with printed track information (.docx) and program notes (.docx). For all other solo project types, deliverables and appropriate submission formats for those deliverables, will be established at the midterm project meeting. By the Wed., May 4, noon deadline, all students must upload their project files and a *Final Project Report* paper (.docx):

Undergraduate students: 5-10 typed, double-space pages
Graduate students: 8-12 typed, double-spaced pages

The *Final Project Report* should describe the final solo and group projects in all matters of detail and document the student's creative/technical process over the course of the term. It should also document the student's participation in the group project work. Up to 30% of the report may be dedicated to personal reflection and assessment of the solo project and group work. The details of the final report will depend on the type of project executed and thus will be discussed at the midterm and/or final project meetings.

INFORMAL JOURNAL
In order to document the creative/technical processes employed in the project and make the final report easier to write, it is highly recommended that each student *keep an informal journal* of every work session.

Academic Integrity
The *Carolinian Creed* is available online at <https://www.sa.sc.edu/creed/>.The university's honor code is available online at: <http://www.sc.edu/policies/ppm/staf625.pdf>. It is expected that all students will follow these guidelines for student conduct.

Learners with Special Needs
Students with a documented disability must register with the Student Disability Resource Center (SDRC). SDRC will provide me with an official letter that sets forth your accommodations. I will work with you and with the SDRC to make sure all accommodations are met. For more information call (803) 777-6142 or visit:

https://sc.edu/about/offices_and_divisions/student_disability_resource_center/

Grading Scale

100-90 **A**	89-85 **B+**	84-80 **B**	79-75 **C+**	74-70 **C**	69-65 **D+**	64-60 **D**	59-0 **F**

Grade Distribution and Evaluation Criteria

Solo Project – 40 %

- Scheduled, attended, and prepared for the required project meetings
- Submitted the required project plan, project plan updates, and progress reports in a timely fashion
- Met the goals set forth in the project plan
- Artistic quality (and quantity) of the project
- Technical mastery displayed by the project
- Consistent work effort displayed throughout the term
- Kept the instructor informed regarding project developments
- Followed up on instructor suggestions
- Other considerations: public performance, recording produced, score produced; supporting document produced, etc.

Group Project – 30%

- Promptly interacted with collaborators to set up group meetings and complete assigned work
- Attended group meetings
- Significantly contributed to group discussions and work
- Fulfilled assigned duties within the group
- Other considerations: leadership, creativity, personal initiative, unique contribution to work, hard work, etc.

Final Report – 30%
See the guidelines above

Any necessary modifications to these distributions will be established at the initial project meeting.