

GTCMT Independent Research Courses — Syllabus

MUSI 4699 / MUSI 4705 / MUSI 7000 / MUSI 7100 / MUSI 9000

Fall 2026

Location: TBA

Instructor Information

Instructor: Claire Arthur

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Office Location: Couch 203B

Office Hours: By appointment

General Course Information

Description

These courses provide an academic framework for independent guided research and/or creative work as a member of the Computational and Cognitive Musicology Lab (CCML), within the Georgia Tech Center for Music Technology (GTCMT).

Working individually or in groups, you will apply your practical skills, theoretical knowledge, and critical thinking abilities to the design and development of novel research or creative projects related to music technology. GTCMT projects may focus on research inquiry or creative artistry, but ultimately any combination of science, engineering, and creative music making is appropriate. The final product(s) of your work may be scholarly papers or presentations; compositions or recordings; performances or installations; or new musical software, hardware, or musical artifacts. Your work in these courses will ultimately culminate in a completed Capstone project, Masters project, Masters thesis, or PhD thesis.

The individual-study nature of these courses will allow you to define your own research directions based on your personal interests and skills, subject to my guidance and oversight.

Course Learning Outcomes

Through these classes, you will develop your...

- Knowledge of technical and aesthetic practices in music technology;

- Ability to design and implement artistic works, artifacts and interfaces, software, software frameworks, research studies, and/or educational interventions in music technology;
- Ability to approach a research project by formulating a research question, doing a literature survey, designing and realizing methodology, evaluating and analyzing the results, and presenting the results in a presentation and a scientific paper, artistic work, and/or artifact.

Course Credit

These courses can be taken multiple times for credit. Consult our Academic Advisor Erin Jackson for details.

BSMT

- MUSI 4699 — take zero or more times.
- MUSI 4705 — take one or two times.

MSMT

- MUSI 7100 — three or four enrollments required.
- MUSI 7000 — two enrollments required for students on thesis track.

PhDMT

- MUSI 7100 — three or more enrollments required.
- MUSI 9000 — one or more enrollments required.

Meetings

All students are expected to attend the following recurring meetings each week:

- GTCMT Seminar: Mondays 2:00–2:50pm, location TBA
- Lab meeting: 1 hour weekly, time and location TBA
- Advisor meetings: weekly, time and location TBA

Prerequisites

Prior experience in music composition, theory, production, and/or performance is helpful, as is experience in allied fields such as computer science, human-computer interaction, mechanical engineering, electrical engineering, industrial design, data science, psychology, and/or education.

Required Course Materials

No required textbooks or materials. Resources for research are determined in consultation with the thesis/project advisor.

Grading Policy

Note: number of assignments and grade percentages subject to revision prior to first week of class.

Attendance	15%
Presentations	20%
Writing	15%
Project Work	50%

Description of Graded Components

Attendance

Attendance accounts for 15% of your grade and encompasses your presence and engagement at all required meetings: the weekly GTCMT seminar, weekly lab meetings, Guthman competition work and show, GTCMT research showcase events, post-proposal feedback sessions, and scheduled individual or group meetings with the instructor. Regular, punctual attendance at all of these is expected. If you must miss a meeting, please notify the instructor in advance.

Presentations

Presentations account for 20% of your grade and include talks given in the GTCMT seminar, lab meetings, and research showcase demos, posters, or performances. Specific presentation expectations vary by degree program and are detailed in the Course Requirements section below.

Writing

Writing accounts for 15% of your grade and includes your final paper, written proposals, and any other assigned progress reports (including mid-semester reports required each semester).

Project Work

Project work accounts for 50% of your grade and is evaluated based on weekly progress and updates, as well as your final product. Though projects may extend through multiple semesters, progress and deliverables are evaluated each semester of enrollment.

Course Policies

Attendance and Participation

All students must attend and participate in three weekly meetings: the weekly GTCMT seminar (Mondays at 2:00pm, location TBA), weekly lab meetings, and regular group or individual meetings with the instructor. You are also expected to present your work in lab meetings and — except for first-year MS students — in the seminar, at least once per semester.

Specific presentation requirements by degree program:

MSMT students:

- Project/thesis proposal in GTCMT seminar — penultimate semester of enrollment.
- Project conclusion in GTCMT seminar — final semester of enrollment.

PhDMT students:

- Research presentation — every semester.
- Dissertation proposal and defense — once each, when enrolled in MUSI 9000.

All students:

- Poster/demo/performance in GTCMT research showcase — final semester of enrollment.
- Presentations in lab meeting, when asked.

Course Requirements and Deliverables

Semester Requirements

Though your projects may extend through multiple semesters, there are requirements and associated grades assigned each semester of enrollment:

Papers:

- Mid-semester report(s) — each semester.

- Final paper — each semester.

Research Showcases

At the end of each Spring semester (and sometimes Fall as well), the GTCMT hosts one or more research showcase events. All students are required to attend all showcase events. All Capstone, second-year MS, and PhD students are also required to participate in one showcase event per semester.

The nature of your showcase participation depends on the nature of your project. All participants should prepare a conference-style poster describing their project and the work accomplished that semester. Projects with tangible software or hardware deliverables should also demonstrate their systems. Creative projects may be realized in a public performance.

Masters Project/Thesis Proposal

All MSMT students must submit a MS project proposal during their second-to-last semester in MUSI 7100. The proposal includes a written component, an oral presentation to the GTCMT seminar, and a follow-up feedback session with the GTCMT advising faculty. Project-track students must submit a 3–5 page proposal; thesis-track students must submit an 8–15 page proposal. All oral presentations are 12–15 minutes. The written proposal should be submitted to the instructor by the end of the sixth week of classes.

Details of the proposal requirements can be found in the graduate handbook.

Graduation Requirements

Details concerning requirements of the Masters Project/Thesis and PhD dissertation can be found in the School of Music Graduate Handbook. Note that Masters and PhD theses have many specific requirements and deadlines set by the institution, so be sure to consult the handbook carefully and early. Capstone and non-thesis Masters projects require fewer hurdles and are evaluated and graded at the instructor's discretion.

Guthman Competition

As part of this class, all students are required to attend the Guthman Musical Instrument Competition finals at the Ferst Center for the Arts. Students must also sign up for a shift to assist with the competition during the week leading up to the event. Details about shift sign-up will be provided closer to the event.

Academic Integrity

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards.

Review [Georgia Tech's Honor Code](#) and the [student Code of Conduct](#).

Any student suspected of cheating or plagiarism on a quiz, exam, or assignment will be reported to the Office of Student Integrity, who will investigate the incident and identify the appropriate penalty for violations.

Students are encouraged to support each other, but each artifact must be clearly executed by the individual or group being graded. All work submitted, whether individually or as a group, must be original work. Students are expected to understand how to properly cite and reference any sources used.

All Doctoral and Master's thesis students are required to complete the Responsible Conduct of Research training and are expected to abide by the principles taught in that training while performing research for this thesis course.

Core IMPACTS

Not applicable.

Accommodations for Students with Disabilities

If you are a student with learning needs that require special accommodation, contact the [Office of Disability Services](#) (404-894-2563) as soon as possible to make an appointment to discuss your special needs and to obtain an accommodations letter. Please also e-mail me as soon as possible in order to set up a time to discuss your learning needs.

Student-Faculty Expectations Agreement

At Georgia Tech, we believe that it is important to strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body. [The Student-Faculty Expectations](#) articulate some basic expectations that you can have of me and that I have of you. In the end, simple respect for knowledge, hard work, and cordial interactions will help build the environment we seek. Therefore, I encourage you to remain committed to the ideals of Georgia Tech while in this class.

Additional Course Policies and Information

Diversity, Equity, and Inclusion

The School of Music community of faculty, staff, and students aspires to create and nurture an environment that is supportive of all backgrounds where different views and ideas are respected and encouraged. In all our pursuits, we commit to justice, diversity, equity, and inclusion with regard to race, national origin, language, age, sexual orientation, gender, religion, and ability. Moreover, we will encourage intellectual inquiry and respectful exchange that cements our dedication to these principles.

As the instructor of this course, I endeavor to provide an inclusive learning environment. If you experience barriers to learning in this course, do not hesitate to discuss them with me, the Office of Disability Services, or the School of Music administration.

Student Use of Mobile Devices

The use of mobile devices in seminar, lab meetings, or research meetings is not allowed unless explicitly permitted by the instructor.

Changes to Course

Since all research and creative work progress at different rates, it may be necessary to modify the requirements laid out in this syllabus as circumstances dictate. Adequate notification will be given in writing and discussed in class.

Academic Grievance Policy

Students should first discuss any concerns with the relevant faculty member. If it is not possible to come to resolution with the faculty member, students may then report the matter to the appropriate administrator (Chair, Associate Chair, or Director of Studies) of the department of instruction, or report it via the links below.

[Academic Grievance Reporting](#)

[Georgia Tech Academic Grievance Policy](#)