

GTCMT Independent Research Syllabus

Courses Fall 2026

- MUSI 4705 — Undergraduate Capstone
- MUSI 7100 — Graduate research
- MUSI 9000 — PhD thesis

Course Credits

These courses can be taken multiple times 3 credits; 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 — four enrollments required
 - MUSI 7000 — two enrollments required for students on [thesis track](#)
- **PhDMT**
 - MUSI 7100 — four or more enrollments required
 - MUSI 9000 — one or more enrollments required

Instructor Information

Instructor: Alexandria Smith

General Course Information

Description

These courses provide an academic framework for independent guided research and/or creative work as a member of the Creative Music Technology Lab (CMTL), 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, Master's project, Master's 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

- **Locate** and evaluate relevant scholarly sources. Gather source material for future work.
- **Identify** technical and aesthetic practices in music technology.
- **Construct** a research question, a literature review, a methodology, and an evaluation method for your project.
- **Design** and **implement** artistic works, artifacts, and interfaces, software, software frameworks, research studies, and/or educational interventions in music technology.
- **Present** findings and results in a presentation, a scientific paper, artistic work, and/or artifact.

Required Course Materials

Variable by projects. Students are expected to fund and support their projects unless they are aligned with a PI's research grant. This could include microcontrollers, components, software, and related items. The lab will supply a shared computer, speakers, and some components for student work.

Students are encouraged to use the free resources listed below. Note: some require you to complete a training session.

- [the hive](#) - has many components available to students for free. Many resources for fabrication, such as 3D printing.
- [Invention Studio](#) - has many components available to students for free. Many resources for fabrication, such as 3D printing, a woodshop, CNC, welding, and more.
- [Craft Lab](#) - in the IPaT Building that has free resources for making wearable electronics, such as sewing machines, 3D printers, etc.

- IPDL – hosted by industrial design. Noah is an amazing resource and loves working with music students.

Grading Policy:

- **Attendance:** 15%
 - At GTCMT seminars, lab meetings, Guthman work/show, GTCMT showcases, post-proposal feedback sessions, and scheduled individual/group meetings.
- **Presentations:** 20%
 - In GTCMT seminar, lab, and GTCMT showcase demos/posters/performances.
- **Writing:** 15%
 - Including final paper, written proposals, and other assigned progress reports.
- **Project work:** 50%
 - Weekly progress, updates, and final product.

Description of Graded Components

Details concerning requirements of the Master's Project/Thesis and PhD dissertation can be found in the School of Music Graduate Handbook, [here \(MS\)](#) and [here \(PhD\)](#). Note that master's 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 Master's projects are evaluated and graded at my discretion.

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

- **Papers**
 - Mid-semester report(s) – each semester
 - Final paper — each semester
- **Presentations**
 - *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 — generally every semester
- Dissertation [proposal](#) and [defense](#) — once each, when enrolled in MUSI 9000
- *All students*
 - Poster/demo/performance in GTCMT research showcase — see [below](#)
 - Presentations in lab meeting, when asked.

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 part, 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 a 8–15 page proposal. All oral presentations are 12–15 minutes. The written proposal should be submitted to me by the end of the sixth week of classes; I will also share the proposal with other GTCMT advising faculty.

Details of the proposal requirements can be found in the graduate handbook, [here](#).

Required Research Showcase

At the end of each semester, the GTCMT hosts one or more research-showcase events. The goal of these showcases is to describe, explain, and motivate the work we've accomplished this semester to our peers in the School of Music—and (sometimes) to guests from the wider public.

This Fall, we will have one research showcase event, Friday, December 5th, from 2:40–5:30pm. This event is open only to School of Music students, faculty, and staff, with at most one guest per person. All GTCMT students must attend this event.

All first-semester MSMT students and capstone teams will be required to showcase their work. (Other students must also showcase their work *if* their advisor wants them too.) All other students are welcome to do a demo, poster, performance, or talk if they want.

The nature of your participation in the showcase depends on your project. Consult with your advisor to decide. Generally, you may either do a demonstration, a performance, or a conference-style poster. Regardless of mode, everyone must prepare a two-minute “lightning talk” to introduce their project before their demo/performance/poster session.

Course Policies

USG Required Course Policies [remove this heading in your final syllabus]

Attendance and/or Participation

All students must attend and participate in three weekly meetings:

- The weekly [GTCMT seminar](#) — Mondays at 2:00pm in West Village 175
- Our weekly lab meetings — Wednesday at 2:00pm in Couch 207
- Regular group or individual meetings with me, on Teams or in my office (Couch 203C)

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.

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.

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 it is important to foster an atmosphere of mutual respect, acknowledgment, and responsibility between faculty members and the student body. [The Student-Faculty Expectations outline](#) some basic expectations you can have of me, and 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 Georgia Tech's ideals throughout this class.

Optional Course Expectations, Policies, and Resources [Remove this heading in your final syllabus and eliminate the separation between the required and optional policies]

[While the following policies are not required, they include important expectations and resources that you may choose to share with your students. [Visit our Course Policies page](#) to find more sample policies, information about Georgia Tech specific rules and regulations, and suggestions for what to consider when setting each policy.]

As you write this portion of your syllabus, use language that emphasizes your students' role in the process, and aim for a tone that communicates both authority and approachability. Each policy should make it clear what is and is not expected/permissible in this class, what the rationale or motivation behind the policy is, what students need to do in extenuating circumstances, and what the consequences will be if they fail to live up to the expectations laid out in the policy. Finally, your policy should represent something that you are comfortable implementing consistently throughout the course.]

Pre- &/or Co-Requisites

[If applicable, list pre-requisites here. In some instances, you may also want to describe the background knowledge/experience that is most likely to lead to success in your course (this is often relevant in a graduate level seminar and upper-level elective courses).]

Extra Credit Opportunities

[If applicable, include a statement about opportunities for extra credit here. Views on extra credit opportunities vary among faculty. You might decide not to offer extra credit opportunities because you want your students to work hard in class and spend time working on actual assignments, or because you think extra credit lowers academic standards. However, extra credit can also be a good learning opportunity because it gives students an additional chance to learn the material (especially students who are struggling in the course). It also reduces student anxiety and builds their motivation and confidence.]

Collaboration, Group Work, and Use of Generative AI

[The university's Honor Code gives you the job of defining for your students the levels of collaboration that are permitted, as well what outside resources they are permitted to use (on assignments, exams, projects, etc.), and how they are supposed to report their use of those outside resources. You may also choose whether or not and to what extent students may collaborate with Generative AI in their course work. CTL provides guidance and some

adaptable template syllabus statements for use of GenAI in [this web resource on Establishing Course Policies](#). Articulate your policy here.]

Extensions, Late Assignments, & Re-Scheduled/Missed Exams

[Students need to know what your policy is on things like late assignments and missed exams. You should be as clear as possible about your rules and the consequences for your students if they do not follow them. You want to help students focus their efforts appropriately and make it easy for you to be consistent throughout the course. Note also that, at Georgia Tech, some exceptions are made for “approved Institute activities” (e.g., field trips and athletic events) and religious observances. [Read more about approved exceptions](#). Note also that instructors are encouraged to consider the impact of events like the [All-Majors Career Fair](#) and off-campus interviews, and to plan accordingly.]

Inclement Weather and Digital Learning Days

[If a weather-related event affects campus operations, instructors have the discretion to cancel class or pivot to digital instruction. Informed by departmental and/or program considerations, you may choose to include language here that proactively instructs students what they should expect in such an event. [Read more about the policy regarding the requirements, procedures, and responsibilities related to Digital Learning Days for Modified Campus Operations](#). Explore the [Digital Learning Day Toolkit](#) to learn more about guidance and tools that will make pivoting to digital learning easier.]

Student Use of Mobile Devices in the Classroom

[To set this policy, think about individual students, the overall dynamic you would like to see at work in your classroom, and your own tolerance of distractions in the classroom. See [our Course Policies page](#) for more information about factors to consider when it comes to setting your policy for the use of mobile devices in your classroom.]

Additional Course Policies

[There are a variety of additional policies you might include in your in your syllabus, depending on your specific context and approach to your course. For example, many instructors include at least one of the following policies explicitly on their syllabus ([View additional course policy examples](#)):

- *Remote proctoring*
- *Accommodations for religious observances*
- *Food and drink in the classroom*
- *Freedom of expression and guidelines for discussion*

- *Institute-approved absences*
- *Lab safety*
- *Preparation for guest speakers*
- *Re-grading and re-submission*
- *Recording class activities]*

Campus Resources for Students

[Students might not be aware of all available campus resources. In this section you can include specific resources that might help students succeed in your class (e.g., the library, The Communication Center, or Tutoring and Academic Services).

Undergraduate Student Academic Success Resources:

[For undergraduate courses, a sample statement that might be included in your syllabus for this section is “A list of resources for undergraduate students’ academic success and information about advising can be found at [Success at Tech.](#)]

- Academic Support: Academic Success and Advising (a unit in the Office of Undergraduate Education & Student Success) provides free support for your courses. Students can attend scheduled supplemental review (PLUS) sessions, stop by Drop-In Tutoring, or schedule a one-on-one appointment through Knack. To explore what options work best for you, please visit us online at success.gatech.edu/tutoring, email us at tutoring@gatech.edu, or come see us at Clough Undergraduate Learning Commons, Suite 283.

Graduate Student Academic and Professional Success Resources:

[For graduate courses, a sample statement that might be included in your syllabus for this section is

A list of resources for graduate students is given on the [Office of Graduate and Postdoctoral Education](#) website. Specific information for [current graduate students](#) includes

- [Academic Resources](#) such as the Communications Center, Language Institute, Library, Catalog, Registrar, resources for conducting research, Advocacy and Conflict Resolution resources, and how to manage unexpected situations that may impact your academic performance;
- [Student Resources](#) such as Campus Services, Child Care/Family programs, Health & Wellness, Career Services, and the Student Resource Guide; and

- [Professional Development](#) such as the programming from the Career Center and other professional development resources and events”

Student Well-Being:

[Some faculty include resources that support students’ mental and emotional well-being. Including these additional resources on your syllabus communicates to students that you care about them and that you are committed to facilitating their academic progress. For all courses, a sample statement that might be included in your syllabus is

At Georgia Tech, we are concerned about your overall physical, social, and mental well-being. A [comprehensive list](#) of wellness related resources has been compiled and maintained by the Office of the Vice President for Student Engagement and Well-being ([student-resource-guide \(gatech.edu\)](#))

[More resources on supporting student well-being on the syllabus and beyond are available through the [Learning Well Initiative](#).]

Additional Syllabus Components [remove this heading from your final syllabus]

[Depending on your specific context, as well as your own approach to your course and your teaching, you might decide to add other components to your syllabus. Research suggests that a more detailed syllabus is seen by students as a sign of teaching effectiveness, instructor approachability and flexibility, and as a motivating factor in class preparation. Additional information on your syllabus might include:

- *a statement of your teaching philosophy;*
- *Consider linking to [the strategic plan](#) and emphasizing the intention to create a holistic learning environment where all individuals can grow and learn to lead healthy, purposeful, impactful lives;*
- *a statement about the importance of student mental health and well-being.*
- *rationale for your teaching techniques;*
- *grading rubrics;*
- *information about labs, recitations, etc.;*
- *advice on how to succeed in your course.]*