CS8803-SRD, CS8803-OSR: Syllabus

Course Prefix and Number: CS8803-SRD, CS8803-OSR

Course Name: Sonification Lab R&D Studio

Semester: 2026 Fall

A. Instructor Information

Instructor: Bruce N. Walker

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B. General Course Information

1. Description

The Sonification Lab Research and Design Studio is a semester-long, 3-credit course, which aims to bring together small, agile, interdisciplinary teams of students to tackle research and design challenges related to the research going on in the GT Sonification Lab.

The approach is a sort of "middle ground" between (a) a typical semester-long project course, in which typically teams of four students tackle a major project; and (b) an independent study where one student interacts directly with a professor and does a project alone.

In this R&D Studio, students are assigned to project teams by the instructor, based on the projects available, the needs of the projects and the Lab, and also the skills and preferences of the students who are in the class. Note that while the students will asked for their preferences, the instructor has final say on which projects we will work on in any given semester, and on the assignment of students to each project.

2. Course Learning Outcomes

Learning in this course will occur through lectures, discussions, in class and out of class activities (most notably research), and assignments. However, the main activities will center on completing the research and development project, and reporting on progress regularly.

At the end of this course, you should be able to:

- Appraise a research context and develop a focused problem space

- Conduct appropriate research and development/design activities to advance the project
- Interpret research findings to synthesize and inform design decisions
- Document and communicate research findings and development progress to demonstrate the evidence-based process

C. Required Course Materials

There are no specific required course materials, other than those required in any GT course (e.g., personal computer). Any additional resources (e.g., specific software) that become required will be provided to the students.

D. Grading Policy:

Team Check-ins	40%
Final Deliverables	40%
Attendance, participation, engagement	20%

1. Participation/Engagement

The class meets once per week via Teams. Each week some of the project teams will provide formal check-in presentations, including slides that document progress on the project. Feedback is provided, and some discussion about each project, specifically, as well as the connections between the projects. Thus, attendance is expected and required at all class meetings.

Attendance and contributions will be factored into the final score a student gets for the Team check-in assignments.

Contributions to the team assignments will also be assessed as part of the attendance, participation, and engagement element in the grade.

2. Team Assignments

Along the course of the semester there will be some required deliverables including:
(0) about 6 check-ins (every couple of weeks), which include uploading a set of slides the night before, and making a verbal presentation during class about progress since the previous check-in
(1) a project proposal, including a plan to divide up the work amongst the two students;
(2) a survey of literature, existing projects, existing products/systems, prior art, patents, etc.;
(3) a short (1-minute) video of the project;
(4) a poster and/or demonstration suitable for use in IPaT Demo Days, etc.; and

(6) a final report, in the form of a draft conference paper; this assumes, of course, that the system is completed and evaluated, and research conducted. The development is only part of the project; the research is also a major component.
(7) a final presentation, typically held during the final exam slot for the course.
Note that it is required that all code, designs, electronic files, scripts, sketches, etc. be archived. This is not factored into the points total, but students will not pass the course unless and until their project is archived.

E. Core IMPACTS

Not applicable.

F. Course Policies

1. Attendance and/or Participation

Attendance in all class meetings and exams is mandatory. Failure to attend may jeopardize the learning opportunity of the students and their teammates.

2. Follow-On

The efforts in this Research and Design Studio course will live on in the research of the lab. Other student teams may carry on, or iterate, or extend your work in a later semester. Or the system you create may be deployed in a classroom, or used in a dissertation, or whatever. It may also spark a larger project or even a proposal for grant funding. You have to anticipate that you are part of a larger effort, and conduct your work accordingly. This includes, for example, providing all the iterations and drafts, and all the code (commented!!) and electronic files, so that the next team can pick up your work and run with it. We will require that resources are appropriately archived (code in the Github repository, other documents and data archived on our file server, etc.). Note that you may choose to do a follow-on project, yourself. This might be through another SonLab R&D Studio in a later semester, or by moving into a Master Project or Masters Thesis, or even a project in another class.

3. 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.

4. 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.

5. 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.

6. Respect and Consideration

Please, above all, be respectful and considerate of others in the class. It should go without saying, but this includes showing up on time for classes, meetings, exams, etc. Please mute all devices while in class. Consider that others sitting around you can see what is on your screen.

7. Recordings and Further Dissemination

The course content, recordings, exams, and materials provided by the instructor in this course are copyright and protected, and for the use of the students enrolled in the course and cannot be further disseminated. Electronic video/audio recordings initiated by students are not permitted unless an explicit permission is granted by faculty.

8. Policy on Use of Generative AI for class work

In this class we treat AI-based assistance, such as ChatGPT and Copilot, the same way we treat collaboration with other people: for both individual and team-based assignments, you are welcome to talk about your ideas and work with other people, both inside and outside the class, as well as with AI-based assistants.

However, all work you submit must be your own. You should never include in your assignment anything that was not written directly by you without proper citation (including quotation marks and in-line citation for direct quotes).

Including anything you did not write in your assignment without proper citation will be treated as an academic misconduct case. If you are unsure where the line is between collaborating with AI and copying AI, we recommend the following heuristics:

Heuristic 1: Never hit "Copy" within your conversation with an AI assistant. You can copy your own work into your own conversation, but do not copy anything from the conversation back into your assignment.

Instead, use your interaction with the AI assistant as a learning experience, then let your assignment reflect your improved understanding.

Heuristic 2: Do not have your assignment and the AI agent open at the same time. Similar to the above, use your conversation with the AI as a learning experience, then close the interaction down, open your assignment, and let your assignment reflect your revised knowledge.

This heuristic includes avoiding using AI directly integrated into your composition environment: just as you should not let a classmate write content or code directly into your submission, so also you should avoid using tools that directly add content to your submission.

Deviating from these heuristics does not automatically qualify as academic misconduct; however, following these heuristics essentially guarantees your collaboration will not cross the line into misconduct.

G. Campus Resources for Students

1. Undergraduate Student Academic Success Resources:

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.

2. Graduate Student Academic and Professional Success Resources:

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"*

3. Student Well-Being:

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)