

BMED 4699 – Undergraduate Research: Syllabus

Instructor Information

Dr. Jonathan Chang (jchang370@gatech.edu)

General Course Information

Description

Undergraduate research conducted under the guidance of a faculty mentor.

What is undergraduate research? Broadly, undergraduate research is a research, scholarly, or creative project conducted by an undergraduate student under the guidance of a faculty mentor that contributes new knowledge and/or discoveries to the broader professional community.

Why is undergraduate research important? Undergraduate research is a recognized high-impact practice and an important transformative learning experience for students. High-quality mentored research experiences build confidence, foster deeper understanding, and enhance personal and professional development.

Course Learning Outcomes

- Communication
 - Uses and understands professional and discipline-specific language
 - Demonstrates an ability to interpret, evaluate, and create visual representations of ideas
- Critical Thinking and Problem Solving
 - Uses a reflective and iterative approach to problem solving
 - Looks for the root causes of problems and develops or recognizes the most appropriate corrective actions
 - Recognizes flaws, assumptions, and missing elements in arguments
- Practice & Process of Inquiry
 - Demonstrates ability to formulate questions and hypotheses within the discipline
 - Demonstrates ability to properly identify and/or generate reliable data
 - Shows understanding of how knowledge is generated, validated, and communicated within the discipline

Required Course Materials

None required.

Statement About Acceptable Student Conduct

Faculty research mentors and students should discuss and agree on expectations before beginning an undergraduate research course. Expectations should include the student's weekly time commitment; methods and frequency of communication between the student and mentor(s); how research will be recorded, stored, and shared; and when and how students will reflect on their successes and challenges. 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.

To support mutual respect and understanding between students and faculty, Georgia Tech faculty and students collectively adopted a list of student-faculty expectations. See the full Student-Faculty Expectations agreement here: <https://catalog.gatech.edu/rules/22/>

Grading Policy

This course is graded on a letter grade basis. The grade will be assigned based on agreed upon objectives commensurate with the difficulty and scope of the project, the number of credit hours, as well as the technical proficiency of the student. It is the joint responsibility of the instructor and the student to discuss expectations and how meeting or not the expectations affects the final grade. The grading process will be clearly articulated to the student to allow reasonable prediction progress towards the final grade throughout the semester.

Attendance Policy

Undergraduate research students will participate in research activities on a weekly basis.

Academic Honesty/Integrity Statement

Students are expected to maintain the highest standards of academic integrity. All work submitted must be original and properly cited. Plagiarism, cheating, or any form of academic dishonesty will result in immediate consequences as outlined in the university's academic honor code: <https://policylibrary.gatech.edu/student-life/academic-honor-code>

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.

Campus Resources

The Undergraduate Research Opportunities Program (UROP) provides resources and support for undergraduate research students and their mentors. Visit <https://undergradresearch.gatech.edu/> or contact UROP at urop@gatech.edu for more information.