UNDERGRADUATE STUDIES IN

BIOCHEMISTRY



Biochemistry is the application of fundamental chemical concepts to living systems. Biochemists seek to understand and use the structure and function of nucleic acids, proteins, carbohydrates, and lipids, and their interrelationships on a molecular and cellular level. Expertise in biochemistry lays a solid foundation for careers in the biological sciences, biotechnology, forensics, healthcare, and many other areas.

Foundational understanding, laboratory experiences, pre-health option

The School of Chemistry and Biochemistry offers a broad curriculum that prepares students for a wide range of exciting careers in healthcare, industry, academia, government agencies, patent law, and consulting. The B.S. degree program in biochemistry provides an excellent background for admission to medical, dental, graduate, law, and pharmacy schools, and we offer a pre-health track within the degree program as additional preparation for healthcare professions. The program engages students in an undergraduate curriculum that expands their analytical and critical thinking skills in both classroom and laboratory settings. Students can pursue our B.S./M.S. option, where it is possible, by careful course selection, to obtain both B.S. and M.S. degrees in five years of study.

Cutting-edge research

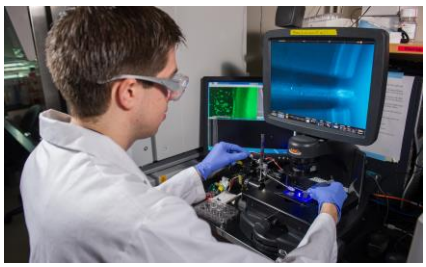
The B.S. degree in biochemistry aligns with the recommendations of the American Society for Biochemistry and Molecular Biology and is a superb major for pre-medical, pre-dental, and pre-pharmacy students. Students enjoy exceptional opportunities to participate in cutting-edge, world-renowned research programs. Close interactions with faculty and graduate researchers create a unique learning environment, combining the intellectual challenge of biochemistry with the excitement of discovery in a creative and team-oriented environment. Students make use of state-of-the-art facilities and often appear as co-authors on papers published in scholarly journals or present their work at scientific conferences. Students may also elect to complete the Institute's Research Thesis Option.

FOR MORE INFORMATION

For more information, please see **chemistry.gatech.edu**, or contact the school's Director of Advising **Hui Zhu** at **hui.zhu@chemistry.gatech.edu**.













Undergraduate research

Biochemistry majors are strongly encouraged and supported in conducting research. Students working in world renowned research groups within the school coauthor work which is presented at national and international conferences and published in leading scholarly journals. For example:

- **Russell Kirkland** has coauthored a paper with the France lab titled "Dearomative, Intramolecular Bromoetherification of Carbohydrate-derived Glycosyl Furans: Access to Enantiopure 6-Bromo-Furo[3,2-b]furans" in *Advanced Synthesis and Catalysis* (doi: 10.1002/adsc.202500228).
- **Marielle Frooman** was the 2026 Love Family Foundation Award winner and coauthored a paper with the McShan lab titled "Identification and biophysical characterization of Plasmodium peptide binding by common African HLAs" in *Nature Scientific Reports* (doi: 10.1038/s41598-025-92191-6).
- **Sara Dixon** presented her work in the Kamerlin lab at a national meeting of the American Chemical Society and won a best poster award from the Division of Biochemistry and Chemical Biology.

International opportunities

Students in the School of Chemistry and Biochemistry have wide ranging opportunities for study at institutions throughout the world. Further information can be obtained from the Office of International Education (**oie.gatech.edu**). Each year, many of our majors participate in Georgia Tech-led chemistry programs in Lyon, France (summer semester) and Barcelona, Spain (fall semester).

Careers

The B.S. program in Biochemistry provides exceptional preparation for admission to graduate programs, medical school, dental school, and other professional graduate programs (e.g., veterinary science, pharmacy, law). Biochemistry graduates take positions in many employment sectors, such as:

- Pharmaceutics
- Healthcare
- Forensics
- Clinical laboratories
- Consulting
- Patent law
- Environmental remediation
- High school and college teaching
- Sales and marketing
- Food processing and safety
- Regulatory agencies
- State/Federal agencies (NIH, CDC, DoD)

Georgia Tech has the largest voluntary co-op education program in the nation. Participation in co-op or internship programs provides financial support for your studies and invaluable experiences. See **career.gatech.edu**.

- Georgia Tech is nationally recognized as a top-value college due to its academics, affordability, and career outcomes. [1]
- The U.S. Department of Labor reports that the average salary of biochemists and biophysicists is $129,840. [2]

[1] https://finaid.gatech.edu/costs/return-on-investment
[2] www.bls.gov/oes/current/oes191021.htm