

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.



Theoretical background, practical laboratory experiences, pre-health options

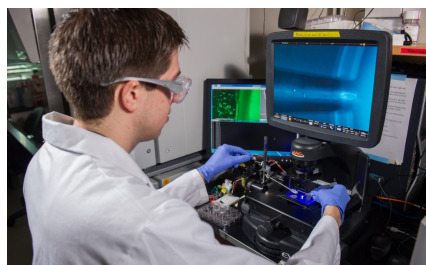
The School of Chemistry and Biochemistry offers a broad curriculum that prepares students for a wide range of exciting careers in healthcare, industry, academia, government agencies, patent law, and consulting. The BS degree program in biochemistry provides an excellent background for admission to medical, 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 BS/MS option, where it is possible, by careful course selection, to obtain both BS and MS degrees in five years of study.

Cutting-edge research

The BS degree in biochemistry aligns with the recommendations of the American Society for Biochemistry and Molecular Biology and is a superb choice of 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 to conduct 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:

- **Natalie Arias** coauthored a paper from the Garg group on “A Silent Biosynthetic Gene Cluster from a Methanotrophic Bacterium Potentiates Discovery of a Substrate Promiscuous Proteusin Cyclodehydratase”, in ACS Chemical Biology (DOI: 10.1021/acscchembio.2c00251)
- Sophia Guldberg was a recipient of an Astronaut Scholarship and coauthored a paper from the Finn group on “Immunological Properties of Protein–Polymer Nanoparticles” in ACS Applied Bio Materials. (DOI: 10.1021/acsaabm.8b00418)
- In addition to conducting undergraduate research with the Hud group at Georgia Tech, **Shiloh Thomas-Wilkinson** spent 3 months studying at the Pontifical Catholic University of Chile in Santiago.

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 (www.oie.gatech.edu). Each year a number of our majors participate in Georgia Tech-led chemistry programs in Lyon, France (summer semester) and Barcelona, Spain (fall semester).

Careers

The BS 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:

- Pharmaceuticals
- 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 www.coop.gatech.edu.

- Georgia Tech ranks in the top 15 universities nationally for 20-year return on investment [1]
- The U.S. Department of Labor reports that the average salary of chemists is \$113,460 [2]

[1] www.payscale.com

[2] www.bls.gov/oes/current/oes191021.htm