BACHELOR OF SCIENCE IN BIOCHEMISTRY

The Bachelor of Science in Biochemistry degree program includes a combination of requirements and electives that ensure a strong foundation in the chemical and biological sciences, while providing the flexibility to tailor the curriculum to satisfy specific interests or career goals. This program may be of interest to students who aspire to careers in research, teaching, or in a life/health science profession (medicine, pharmacy, dentistry). The judicious use of free electives also enables the student to achieve considerable knowledge of other disciplines at Georgia Tech, such as chemical and biomolecular engineering, bioinformatics (computing), biomedical engineering, and biology. The biochemistry curriculum enables majors who are interested in medical, dental, or law school to meet admission requirements of these schools.

Chemistry Website

- Bachelor of Science in Biochemistry - General
- Bachelor of Science in Biochemistry - Business Option
- Bachelor of Science in Biochemistry - Pre-health Option

International Plan

The Bachelor of Science in Chemistry (International Plan) and Bachelor of Science in Biochemistry (International Plan) are offered to undergraduate students seeking to understand their majors in a global perspective. Students in this program must demonstrate proficiency in a foreign language; complete coursework in a country/regional elective, international relations, and global economics; and participate in a study or research abroad experience (usually in the junior year). If a student is pursuing a research abroad experience, they are required to complete a supervised research experience with a faculty member in chemistry or biochemistry at the host institution. Upon successful completion of degree requirements for the International Plan, a "International Plan" designator is indicated on the diploma. If interested in participating in the International Plan as part of the Bachelor of Science in Chemistry or Bachelor of Science in Biochemistry, students should visit: www.internationalplan.gatech.edu.

Chemistry Website

Research Option

The Bachelor of Science in Chemistry (Research Option) and Bachelor of Science in Biochemistry (Research Option) are offered for students who wish to participate in a research project under the supervision of a faculty, or adjunct faculty, member in the School. Participants in the Research Option learn how to address a research problem from experiment design and execution to interpretation of results. There is an expectation that undergraduates who make intellectually significant contributions to completed studies will be co-authors on submissions to high-quality scholarly journals. Research projects are available in the traditional areas of chemistry (analytical, biological, inorganic, organic, and physical chemistry) as well as highly interdisciplinary research areas, such as nanoscience, polymer and materials chemistry, environmental chemistry and sensors, medicinal chemistry, molecular biophysics, and computational chemistry.

To pursue the Research Option in the School of Chemistry and Biochemistry, students should obtain a research project with a faculty member in the department and apply online via www.undergradresearch.gatech.edu. Successful completion of the Research Option requires the following:

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>Select one of the following research options:</td>
<td>9</td>
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<tr>
<td>CHEM 4698/4699</td>
<td>Undergraduate Research Assistantship</td>
<td></td>
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<tr>
<td>LMC 4701</td>
<td>Undergraduate Research Proposal Writing</td>
<td>1</td>
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<tr>
<td>LMC 4702</td>
<td>Undergraduate Research Thesis Writing (take during the term in which students complete their thesis)</td>
<td>1</td>
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<td>Total Credit Hours</td>
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<td>11</td>
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1 supervised research with faculty over three or more semesters
2 approval of proposal on project by a committee of two or more faculty
3 submission of an approved thesis

Successful completion of the Research Option is noted on the student's transcript. Students completing this option often pursue graduate studies in the chemical or biological sciences or careers in industrial or governmental laboratories.

Chemistry Website

BS/MS Option

This BS/MS degree program enables highly motivated students with strong academic credentials to earn a Bachelor of Science in Biochemistry and a Master of Science in Chemistry in five years. The BS/MS program prepares students for competitive career placements with higher earning potentials as well as competitive admission to Ph.D. and professional programs (including medical/law/pharmacy/dental/pharmacy schools). Thesis and non-thesis options are offered for the BS/MS program. Undergraduates with a significant amount of AP/IB/dual enrollment credits are highly encouraged to apply to the BS/MS program.

Admission and Program Requirements:

1. To apply to the program, students must have at least 30 credit hours earned at Georgia Tech with an undergraduate GPA of 3.3 or higher, and fewer than 90 credit hours overall (including transfer credit).
2. If admitted to the B.S./M.S. program, students must complete six credit hours of approved coursework (4000-level or higher) in Chemistry with grades of B or higher prior to earning the B.S. degree and proceeding to the M.S. program. These credits will be counted towards both the BS degree and MS degree. The allowable 4000-level courses are CHEM 4113, 4311, 4341, 4401, 4452, 4485, 4521, 4740, 4759 (this is a newly approved course), 4760, 4762, 4765, 4775, 4776, and 4785 (this is a newly approved course). Special topics courses will be considered on a case by case basis. Due to the many different courses that may double count for the BS and MS degree, CHEM academic advisors will communicate with the Degree Certification Team in the Registrar's Office regarding which specific courses (i.e. six credits)
2 Bachelor of Science in Biochemistry

are double counted for the BS and MS. This step will insure that degree audits are completed correctly.

3. Students considering the M.S. Thesis Option are strongly encouraged to begin undergraduate research early in their B.S. program of study. The student must identify the M.S. thesis advisor prior to completion of the B.S. degree and proceeding to the M.S. program. Research described in an undergraduate thesis submitted as a part of the B.S. Research Option cannot be used in the M.S. thesis.

4. The minimum GPA for graduation with a B.S. in Biochemistry to continue to the M.S. program is 3.00. The minimum GPA for graduation with the M.S. is 2.70.

5. B.S./M.S dual degree programs of study are described below:

A. BS + MS Thesis Option

**Years 1-4:** Completion of all requirements for the B.S. degree including six credit hours of approved coursework (4000-level or higher; not seminar or research, with restrictions on eligible 4XXX courses as listed in the summary) in Chemistry with grades of B or higher that will be counted towards both the B.S. degree and M.S. degree.

Note: An additional six credits of approved graduate course work (6000 level or higher; not seminar or research credit) in Chemistry may be completed while an undergraduate and applied towards the M.S. degree **(so long as these credits were NOT applied towards the B.S. degree)**.

**Year 5:** Completion of CHEM 7000 (3 credits), approved graduate coursework for MS degree requirements (9 credits)

B. BS + MS Non-Thesis Option

**Years 1-4:** Completion of all requirements for the B.S. degree including six credit hours of approved coursework (4000-level or higher; not seminar or research, with restrictions on eligible 4XXX courses as listed in the summary) in Chemistry with grades of B or higher that will be counted towards both the B.S. degree and M.S. degree.

Note: An additional six credits of approved graduate course work (6000 level or higher; not seminar or research credit) in Chemistry may be completed while an undergraduate and applied towards the M.S. degree **(so long as these credits were NOT applied towards the B.S. degree)**.

**Year 5:** Approved graduate coursework for MS degree requirements (12 credits)