BACHELOR OF SCIENCE IN CHEMISTRY

The School of Chemistry and Biochemistry has a vibrant program of study leading to a Bachelor of Science in Chemistry. The flexibility of the curriculum allows students to study fundamental areas of chemistry while tailoring their degree with technical and free electives to produce a well-rounded experience in preparation for a variety of career opportunities. Students may pursue tailored tracks towards the B.S. in Chemistry, including those allowing specialization in: pre-health science, biochemistry, business, and polymers and materials option. There are also many opportunities to gain research experience while working with world class research groups. In addition to coursework, students in the program often participate in a variety of experiential programs, including: undergraduate research, cooperative work, study abroad, summer internships, and serving as an undergraduate teaching assistant.

Faculty in the school are committed to undergraduate education and several have won awards for excellence in teaching. With a faculty to undergraduate student ratio of approximately 1:9, the School prides itself on the close contact that it maintains with its undergraduate students. The high quality of the curriculum and faculty is part of the reason chemistry graduates receive job offers at the highest salary levels for B.S. chemists. Graduates with a B.S. in Chemistry pursue careers such diverse field as forensics, environmental science, biotechnology, and pharmaceuticals in industry or governmental organizations; or they may continue their education in the chemical or biological sciences, or in medicine, pharmacy, dentistry, and law. Chemistry, especially with the biochemistry option (or the stand-alone Bachelor of Science in Biochemistry degree), is a superb preparation for medical school.

Chemistry Website

- Bachelor of Science in Chemistry - General
- Bachelor of Science in Chemistry - Biochemistry Option
- Bachelor of Science in Chemistry - Business Option
- Bachelor of Science in Chemistry - Polymers and Materials Option
- Bachelor of Science in Chemistry - 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). While abroad, students who are pursuing a research experience are required to complete a supervised project with a faculty member in chemistry or biochemistry at the host institution. Upon successful completion of the degree requirements for the International Plan, an "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.

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 work on a research problem 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 significant intellectual contributions to completed studies will be co-authors on papers submitted to high-quality scholarly journals. Research projects are available in the traditional areas of chemistry (analytical, biological, inorganic, organic, physical, and polymer 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 participate in the Research Option in the School of Chemistry and Biochemistry, students must find a research project under the supervision of a faculty member in the department and apply online via www.undergradresearch.gatech.edu. Successful completion of the Research Option requires the following:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td></td>
<td>Select one of the following Research Options:</td>
<td></td>
</tr>
<tr>
<td>CHEM</td>
<td>Undergraduate Research Assistantship</td>
<td>9</td>
</tr>
<tr>
<td>4698/4699</td>
<td>Undergraduate Research Proposal Writing</td>
<td>1</td>
</tr>
<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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</table>

Total Credit Hours: 11

1 supervised research with a chemistry or biochemistry faculty over three or more semesters
2 approval of this 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 degree may pursue graduate studies in the chemical or biological sciences or careers in industrial or governmental laboratories.

BS/MS Option

This BS/MS degree program enables highly motivated students with strong academic credentials to earn a Bachelor of Science in Chemistry 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, 4401, 4452, 4485, 4521, 4740, 4759 (this is a newly approved course), 4760, 4762 (this is a newly approved course), 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) are double counted for the BS and MS. This step will assure 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 Chemistry 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) and approved 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: Completion of approved coursework for MS degree requirements (12 credits)