BIOCHEMISTRY, B.S.

The Biochemistry Major (B.S.) is designed to prepare students for graduate education in the biochemical sciences, for medical, dental, or pharmaceutical professions, or for employment in biotechnology, pharmaceutical, and chemical industries. Students who complete the Bachelor of Science in Biochemistry will meet all or most of the academic requirements for admission to medical, dental, veterinary, or pharmacy schools.

The curriculum involves a solid foundation of Chemistry and Biology courses, along with core and advanced elective courses in Biochemistry. Undergraduate research is encouraged, and students may collaborate with participating faculty from a variety of departments (Chemistry, Biology, Nutrition, Physics, and Kinesiology).

This program follows the biochemistry curriculum recommendations of the American Society of Biochemists and Molecular Biologists.

Overall Requirements

• 120 credit hours, to include at least 36 credits at or above the 300 course level.
• Only major requirements and related area requirement courses at or below the 300-level in which grades of C- or better are earned will be counted toward the major. Students must earn a C- or better in prerequisite major requirements and related area requirement courses before advancing to subsequent courses. Students must have an overall GPA of at least 2.0 in CHE courses at UNC Greensboro.

Degree Program Requirements

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<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
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<td>University Requirements</td>
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<td></td>
<td>General Education Requirements (MAC)</td>
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<td></td>
<td>College of Arts and Sciences Additional Requirements (CIC)</td>
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Major Requirements

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CHE 355  Intermediate Organic Chemistry Lab
CHE 402  Chemistry Seminar
CHE 406  Introductory Physical Chemistry
& CHE 407  and Introductory Physical Chemistry Laboratory
CHE 456  Biochemistry I
CHE 457  Biochemistry II
CHE 458  Biochemistry Lab
CHE 401  Chemistry Seminar Introduction *

Related Area Requirements 29

<table>
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<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
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<tr>
<td>BIO 111  &amp; 111L  Principles of Biology I &amp; Principles of Biology I Laboratory</td>
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<tr>
<td>BIO 112  &amp; 112L  Principles of Biology II &amp; Principles of Biology II Laboratory</td>
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<tr>
<td>MAT 196  Calculus A</td>
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<tr>
<td>MAT 296  Calculus B</td>
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BIO 392  Genetics
& BIO 375  and Cell Biology and Genetics Laboratory

Select one of the following:

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PHY 211  General Physics I
& PHY 212  and General Physics II

PHY 291  General Physics I with Calculus
& PHY 292  and General Physics II with Calculus

Advanced Biochemistry, Advanced Biological Science, or Independent Study Electives 5-7

Select 5-7 credits of the following:

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At least 3 credits must be CHE. 1

CHE 431  Instrumental Analysis
CHE 436  Computational Chemistry
CHE 442  Inorganic Chemistry II
CHE 453  Advanced Organic Chemistry I
CHE 455  Organometallic Chemistry
CHE 470B  Special Topics in Chemistry: Biochemistry
CHE 481  Synthetic Techniques **

CHE 491  Senior Research
CHE 492  Senior Research

BIO 277  Human Physiology
& 277L  and Human Physiology Laboratory

BIO 355  Cell Biology 2

BIO 392  Genetics 2

BIO 424  Plant Physiology and Biotechnology
BIO 443  Biophysics

BIO 464  Developmental Biology
& 464L  and Developmental Biology Laboratory

BIO 478  Hormones in Action

BIO 479  Neurobiology
& 479L  and Neurobiology Laboratory

BIO 481  General Microbiology
& 481L  and General Microbiology Laboratory

BIO 482  Molecular Biological Approaches in Research
BIO 485  Virology

BIO 494  Introduction to Biotechnology
Electives should be sufficient to complete the 120 credit hours required for the degree. Additional advanced courses in Chemistry and Biology are recommended.

**Disciplinary Honors in Chemistry and Biochemistry Requirements**

- A minimum of 12 credit hours as defined below.
- UNC Greensboro cumulative GPA of 3.30 or better or, for transfer students, cumulative GPA of 3.30 or better from all prior institutions.

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<tr>
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<td>Required</td>
<td>3</td>
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<tr>
<td>HSS 490</td>
<td>Senior Honors Project</td>
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<td>6 credits of Honors course work in the major</td>
<td>6</td>
<td></td>
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<tr>
<td>3 credits of Honors course work in the major or another area</td>
<td>3</td>
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**Recognition**

Receive a Certificate of Disciplinary Honors in Chemistry and Biochemistry; have that accomplishment, along with the title of the Senior Honors Project, noted on the official transcript; and be recognized at a banquet held at the end of the spring semester.

**Honors Advisor**

Contact Liam Duffy at liam_duffy@uncg.edu for further information and guidance about Honors in Chemistry and Biochemistry. To apply: http://honorscollege.uncg.edu/forms/disc-application.pdf