# Suggested Course of Study for Obtaining a Major in Chemistry with a concentration in Biochemistry

<table>
<thead>
<tr>
<th>Year</th>
<th>Fall</th>
<th>Spring</th>
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| First Year | **Fall**  
Principles of Structural Chemistry  
Cellular and Molecular Biology  
Calculus I  
Intro Biology Lab | **Spring**  
Principles of Chemical Reactivity  
Calculus II  
Organ. & Ecol. Biology  
1 elective |
| Second Year | **Fall**  
Organic Chemistry I  
Analytical Chemistry  
General Physics  
1 elective | **Spring**  
Organic Chemistry II  
Organic Lab  
General Physics II  
Genetics |
| Third Year | **Fall**  
Techniques in Molecular Biology#  
Biochemistry  
2 electives | **Spring**  
Protein Biochemistry*  
Bacteriology or Cell Physiology#  
2 electives  
Seminar in Chemistry I |
| Fourth Year | **Fall**  
Physical Chemistry I  
Seminar in Chemistry II  
3 electives | **Spring**  
Topics in Molecular Biology#  
3 electives |

#Choose two courses of the four biology electives: techniques in molecular biology, bacteriology, cell physiology, or topics in molecular biology.

*Protein Biochemistry is offered every other year and may be taken during the spring of third or fourth year.
Checklist for Chemistry Degree with a concentration in Biochemistry

___ CHM-155: Principles of Structural Chemistry
___ CHM-165: Principles of Chemical Reactivity
___ CHM-185: Organic Chemistry I
___ CHM-215: Analytical Chemistry
___ CHM-210: Analytical Chemistry Lab
___ CHM-225: Organic Chemistry II
___ CHM-235: Organic Laboratory
___ CHM-415: Physical Chemistry I
___ CHM 405: Biochemistry
___ CHM-575: Protein Biochemistry
___ BIO-145: Cellular and Molecular Biology

Two of the following:
___ BIO-340/345: Techniques in Molecular Biology
___ BIO-525/520: Cell Physiology and lab
___ BIO-515/510: Bacteriology and lab
___ BIO-520: Current Topics in Molecular Biology
___ PHY-216: General Physics I
___ PHY-226: General Physics II
___ MTH-145: Calculus II

___ CHM-705: Seminar in Chemistry I
   -and-
___ CHM-715: Seminar in Chemistry II
   -or-
___ OR-715,- 725: Study and Research at Oak Ridge Laboratory
   -and-
___ CHM-715: Seminar in Chemistry II

Genetics and laboratory (BIO-235/230) and all of the advanced biology electives listed above (“Two of the following…) are strongly encouraged, especially for those planning graduate study.