

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

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.