

**Department of Chemistry and  
Biochemistry (May 2023)**

**Chemistry Major CC**

**(14.50)**

**First Year**

CH107 / CH117,  
CH108,  
MA126, MA129

**Second and Third Year**

PC241, PC242  
CH250: Organic I  
CH241: Analytical  
CH275: Inorganic I  
CH266: Fundamentals of Physical  
Chemistry *OR* CH 365: Biophysical  
CH382 (requires CH251): Biochemistry I

One of these courses can be replaced by an additional upper-level course in a subdiscipline or cognate discipline.

**Fourth Year**

*Three* In-Depth Courses: can be from any specific sub discipline or a mixture of organic, inorganic, analytical, or physical

CH201/300-level research<sup>a</sup>/400-level research<sup>b</sup>  
CH251 (before CH382): Organic II  
CH342: Instrumental  
CH351: Organic III  
CH366: Physical I  
CH367: Physical II  
CH383: Biochemistry II  
CH475: Inorganic II  
CH480: Advanced Metabolism (with lab)

Upper-level courses in cognate disciplines (with significant lab hours) may also be approved by the Department.

CH490: Senior Seminar is Required

<sup>a</sup> from 301, 302, 303, 304 or 305

<sup>b</sup> from 401, 402, 403, 404 or 405

**ACS Certified Chemistry Major**

**(15.50)**

**First Year**

CH107 / CH117,  
CH108,  
MA126, MA129

**Second and Third Year**

PC 241, PC242  
CH250: Organic I  
CH251 (before CH382): Organic II  
CH241: Analytical  
CH275: Inorganic  
CH266: Fundamentals of Physical  
Chemistry *OR* CH365: Biophysical  
CH382 (requires CH251): Biochemistry I

**Fourth Year**

*Three* In-Depth Courses: can be from any specific subdiscipline or a mixture of organic, inorganic, analytical, or physical

CH201/300-level research<sup>a</sup>/400-level research<sup>b</sup> (with paper)  
CH342: Instrumental  
CH351: Organic III  
CH366: Physical I  
CH367: Physical II  
CH383: Biochemistry II  
CH475: Inorganic II  
CH480: Advanced Metabolism (with lab)

Upper-level courses in cognate disciplines (with significant lab hours) may also be approved by the Department.

CH490: Senior Seminar is Required

## **Biochemistry Major CC**

**(16.50)**

### **First Year**

CH107/CH117,

CH108

MA126, MA129

MB131

### **Second and Third Year**

PC241, PC242

MB201: Lab in Cell and Genetics

CH250: Organic I

CH251: Organic II

CH382 (requires CH251): Biochemistry I

CH241: Analytical *OR* CH266:

Fundamentals of Physical Chemistry *OR*

CH275: Inorganic I

### **Fourth Year**

CH383: Biochemistry II

CH201/300-level research<sup>a</sup>/400-level research<sup>b</sup> or MB399 (with department approval):

*Two In-Depth Courses:*

In Biochemistry/Chemistry or Cognate disciplines **with significant lab component**  
May be chosen from the following:

CH342: Instrumental

CH351: Organic III

CH366: Physical I

CH367: Physical II

CH400: Topics courses upon approval

CH471: Ribonucleic Acids

CH475: Inorganic II

CH480: Advanced Metabolism (with lab)

BE344: SEM

BE345: TEM

MB350-Special Topics Lab Research

MB355-Laboratory Advanced Genetics

MB360-Laboratory in Molecular Bio

MB365-Laboratory in Genomics

Other upper-level courses in cognate disciplines (with significant lab hours) may also be approved.

CH490: Senior Seminar is Required

<sup>a</sup> from 301, 302, 303, 304 or 305

<sup>b</sup> from 401, 402, 403, 404 or 405

## **ACS Certified Biochemistry Major**

**(16.50)**

### **First Year**

CH107/CH177,

CH108

MA126, MA129

### **Second and Third Year**

PC241, PC242

CH250: Organic I

CH251: Organic II

CH382 (requires CH251): Biochemistry I

CH275: Inorganic I

CH241: Analytical

CH266: Fundamentals of Physical Chemistry

### **Fourth Year**

CH383: Biochemistry II

CH201/300-level research<sup>a</sup>/400-level research<sup>b</sup> with paper or MB399 (with department approval):

*Two In-Depth Courses:*

In Biochemistry/Chemistry or Cognate disciplines **with significant lab component**  
May be chosen from the following:

CH342: Instrumental

CH351: Organic III

CH366: Physical I

CH367: Physical II

CH400: Topics courses upon approval

CH471: Ribonucleic Acids

CH475: Inorganic II

CH480: Advanced Metabolism (with lab)

BE344: SEM

BE345: TEM

BE366: Comparative Animal Physiology

MB350-Special Topics Lab Research

MB355-Laboratory Advanced Genetics

MB360-Laboratory in Molecular Bio

Other upper-level courses in cognate disciplines (with significant lab hours) may also be approved.

CH490: Senior Seminar is Required