

**COLLEGE OF ARTS & SCIENCES**  
**Biochemistry Major Requirements**

<i>Biological Chemistry</i> .....	9
BIOC 101 Career Oppor. in Biochemistry .....	1
BIOC 431 & 432 Biochemistry I & II .....	6
BIOC 433 Biochemistry Lab .....	2
BIOC 435 Advanced Topics in Biochemistry .....	3
<i>Biological Sciences</i> .....	12-17
BIOS 102 Cell Structure and Function .....	4
BIOS 206 General Genetics or AGRO 315.....	4
BIOS 312 & either 313 or 314 Fund. Microbiology & Lab .....	4 - 5
<i>Chemistry</i> .....	21-24
CHEM 109 & 110 General Chemistry I & II .....	8
(or CHEM 113 & 114 Fund. Chemistry I & II .....	7)
CHEM 221 Elem. Quant. Analysis .....	4
(or CHEM 116 Quant. Chemistry Lab .....	2)
CHEM 251, 252, 253 & 254 (or CHEM 261, 262, 263 & 264)	
Organic Chemistry I & II.....	8
CHEM 471 (or 481) Physical Chemistry .....	4
<i>Physics</i> .....	10
PHYS 141 & 142 Elem. Gen. Physics I & II.....	10
(or PHYS 211, 221, 212, & 222.....	10)
<i>Mathematics</i> .....	10 - 15
MATH 101 College Algebra and MATH 102 Trigonometry.....	5
(or MATH 103 College Algebra and Trigonometry) (MPE*)	
MATH 106 & 107 Anal. Geom. & Calculus I & II .....	10
(High school preparation may relieve the MATH 101 and 102 requirement)	
<i>General Education Requirements</i> .....	31 - 47
Information Discovery & Retrieval (Library 110).....	1
Communications (two English courses).....	6
Human Behavior, Culture and Social Organization	
(two Social Science courses) .....	6
Historical Studies (one course).....	3
Humanities (one course).....	3
Arts (one course).....	3
Race, Ethnicity and Gender (one course).....	3
Languages (0 - 4 courses depending on high school preparation)**....	0-16
Two others.....	6
<i>Electives</i> .....	8 - 37
<b>TOTAL</b>	<b>125 or 130***</b>

Within the same subject matter area, students may request a more advanced course be substituted for a required course.

\* Math Placement Exam will probably be required. Check with the Math Department or website:  
[www.math.unl.edu](http://www.math.unl.edu)

\*\* Four years of high school language (in 1 language) fulfills this requirement.

\*\*\* Student lacks 2 years in the same language in high school.

## TYPICAL PROGRAMS

What does a biochemistry major's course schedule look like? There are as many different schedules as there are students, but an example of one schedule in the College of Arts & Sciences follows:

*Note: electives and general education courses have been chosen arbitrarily for this example.*

### TYPICAL BIOCHEMISTRY COURSE SCHEDULE (Arts & Sciences)

#### Freshman Year

**Fall Semester:** 17 Cr.

CHEM 109 or CHEM 113 (Chem. I)  
BIOS 101 & 101L (Gen. Biology if needed)  
or PSYC 181  
MATH (as determined by Math Placement  
Exam)  
ENGL 150 (Composition)  
BIOC 101 (Career Opportunities)

**Spring Semester:** 15 Cr.

CHEM 110 or CHEM 114 (Chem. II)  
SOCI 101 (Intro to Sociology)  
MATH 106 (Anal. Geom. & Calculus I)  
ENGL 151 (Composition)  
LIBR 110 (Intro. Library Research)

#### Sophomore Year

**Fall Semester:** 16 Cr.

CHEM 251 (Organic Chem.I) & CHEM 253  
(Organic Chemistry Lab)  
BIOS 102 (Cell Structure & Function)  
MATH 107 (Anal. Geom. & Calculus II)  
ENGL 205 (Twentieth Century Fiction)

**Spring Semester:** 16 Cr.

CHEM 252 (Organic Chem.II) & CHEM 254  
(Organic Chemistry Lab)  
PHYS 141 (Gen. Physics I)  
HIST 100 (Western Civilization to 1715)  
BIOS 206 (General Genetics)

#### Junior Year

**Fall Semester:** 15 Cr.

CHEM 221 or CHEM 116 (Quant. Anal.)  
PHYS 142 (Gen. Physics II)  
SPAN 101 (Beginning Spanish)  
BIOC 498 (Undergrad. Research) 1 cr.

**Spring Semester:** 17 Cr.

BIOC 431 (Biomolecules and Metabolism)  
BIOC 433 (Biochem. Lab)  
BIOS 312 & 314 (Microbiology)  
SPAN 102 (Beginning Spanish)  
BIOC 498 (Undergrad. Research) 2 cr.

#### Senior Year

**Fall Semester:** 16 Cr.

BIOC 432 (Gene Expression and  
Replication)  
CHEM 471 (Physical Chem.)  
MUNM 387 (History of American Jazz)  
SPAN 201 (2nd year Spanish)  
COMM 211 (Intercultural Communications)  
BIOC 498 (Undergrad. Research) 1 cr.

**Spring Semester:** 16 Cr.

BIOC 435 (Advanced Topics in  
Biochemistry)  
PHIL 213 (Medical Ethics)  
GEOG 361 (Urban Geography)  
SPAN 202 (2nd year Spanish)  
BIOS 443 (Immunology)  
BIOC 498 (Undergrad. Research) 1 cr