

Biochemistry

Freshman Year

Fall

- BIOL 411, Principles of Biology I
- CHEM 403, General Chemistry I ⁽¹⁾
- MATH 425, Calculus I ⁽²⁾
- ENGL 401, Freshman English

Sophomore Year

Fall

- CHEM 547/549, Organic Chemistry/Lab ⁽³⁾
- PHYS 401, Introduction to Physics I
- MICR 503, General Microbiology ⁽⁴⁾
- Gen Ed

Junior Year

Fall

- BCHM 751, Principles of Biochemistry
- Major Requirement
- Gen Ed

Senior Year

Fall

- Major Requirement
- Major Requirement
- Gen Ed
- Elective

Major Requirement

- MOLECULAR BIOLOGY (Select 1)
BCHM 711, Genomics and Bioinformatics
BCHM 771, Molecular Genetics
BCHM 782, Developmental Genetics
- BIOCHEMISTRY (Select 1)
BCHM 702, Endocrinology
BCHM 750, Physical Biochemistry
BCHM 763, Biochemistry of Cancer
BCHM 794, Protein Structure and Function
CHEM 683/684, Physical Chemistry

Spring

- BIOL 412, Principles of Biology II
- CHEM 404, General Chemistry II ⁽¹⁾
- MATH 426, Calculus II ⁽²⁾
- Gen Ed

Spring

- CHEM 548/550, Organic Chemistry/Lab ⁽³⁾
- PHYS 402, Introduction to Physics II
- BIOL 604, Principles of Genetics
- Gen Ed

Spring

- BCHM 752, Principles of Biochemistry
- BCHM 755, Laboratory in Biochemistry and Molecular Biology
- BIOL 605, Eukaryotic Cell and Developmental Biology
- Gen Ed

Spring

- Major Requirement
- Gen Ed
- Elective
- Elective

- LABORATORY TECHNIQUES (Select 1)
BCHM 754, Laboratory in Biochemistry and Molecular Biology of Nucleic Acids
BCHM 795, Investigations (2 credits per semester for total of 4 credits)
BCHM 799, Senior Thesis (2 credits per semester for total of 4 credits)
ANSC 714, Research Methods in Endocrinology
ANSC 746, Animal Cell Culture
ANSC 751, Cell Culture
ANSC 752, Mammalian Cell Culture
CHEM 756, Advanced Organic Chemistry Laboratory
CHEM 763, Instrumental Methods of Chemical Analysis Laboratory
GEN 702, Genetics Lab
GEN 753, Cytogenetics
MICR 602, Pathogenic Microbiology
MICR 704, Genetics of Prokaryotic Microbes
MICR 705, Immunology
MICR 706/708, Virology
MICR 717, Microbial Physiology
PBIO 774/775, Plant Biotechnology and Genetic Engineering
ZOOL 778, Neuroscience Techniques

- ONE ADDITIONAL COURSE FROM 600- OR 700-LEVEL COURSES IN ANY BIOLOGICAL OR CHEMICAL SCIENCE DEPARTMENT.

⁽¹⁾ Chemistry offers a special section of 403 and 404 for Chemistry and Biochemistry majors. Placement in this special section is preferred.

⁽²⁾ The sequence of MATH 425/426 is preferred for students contemplating advanced professional study, but MATH 424B and BIOL 528 is acceptable.

⁽³⁾ CHEM 651/653 and 652/654 are acceptable alternatives for organic chemistry. The CHEM 545 followed by BCHM 658/659 offerings are to be avoided, unless students are transferring into the major having already taken CHEM 545.

⁽⁴⁾ Biochemistry majors need to take MICR 503 in *Fall* semester, because of conflict with CHEM 548 in the Spring.

