

BIOLOGY: BIOMEDICAL SCIENCES OPTION

Bachelor of Science (BS)

This is a guide based on the 2026-2027 Undergraduate Bulletin and is subject to change. The time it takes to earn a degree will vary based on several factors such as dual enrollment, remediation, and summer enrollment. Students will meet with an academic advisor each semester and use Degree Works to monitor their individual progress.

CURRICULUM CHECKLIST

"Critical Courses" are **italicized and bolded**. Data shows that students who have completed this course in the first two years and have earned the noted grade are most likely to complete this program of study.

70-76 hour major – No minor required

- ___ BY163 Evolution & Ecology (4)
- ___ BY173 Cell & Organismal Biology (4)
- ___ **BY283 Genetics (4)**
- ___ BY389 Career Development in Biology (2)
- ___ CH184 General Chemistry I Lab (1)
- ___ CH185 General Chemistry I (3)
- ___ MI101 Introduction to Microcomputer Applications (3)

Choose one math course:

- ___ MA116 Precalculus A (3)
- ___ MA137 Precalculus (5)
- ___ MA139 Applied Calculus (3)
- ___ MA140 Analytical Geometry & Calculus I (5)

Experiential Learning Requirement: 2 hours

- ___ BY580 Development of Instructional Materials (3)
- ___ BY582 Internship in Biology (1-3)
- ___ BY585 Biology Field Studies (1-6)
- ___ BY587 Experience in Museum Curation (1-3)
- ___ BY591 Biological Research (1-6)

Biomedical Sciences Option Required Courses:

- ___ BY310 General Microbiology (4)
- OR
- ___ BY320 Zoology (4)
- ___ BY311 Vertebrate Physiology (4)

Choose 3 courses (9-12 hours):

- ___ BY312 Comparative Anatomy (4)
- ___ BY402 Molecular genetics (3)
- ___ BY403 Medical Genetics (3)
- ___ BY404 Cell Biology (4)
- ___ BY405 Bacterial Genetics (4)
- ___ BY410 Biological Microscopy (4)
- ___ BY442 Immunology (4)
- ___ BY444 Cellular Mechanisms of Disease (3)
- ___ BY447 Vertebrate Histology (3)
- ___ BY543 Pathogenic Microbiology (4)

Choose 9 hours:

- ___ BY prefix (9)

Non-Biology Requirements – 22 hours:

- ___ CH186 General Chemistry II (3)
- ___ CH187 General Chemistry II Lab (1)
- ___ **CH341 Foundations of Organic Chemistry (4)**
- ___ CH342 Organic Chemistry Lab I (1)
- ___ MAxxx Additional math (for which MA116 is a prerequisite) (3)
- ___ PH120 Introductory Physics I (5)
- ___ PH121 Introductory Physics II (5)

General Education Requirements – some requirements may be fulfilled by coursework in major program

- Social and Behavioral Sciences – 6 hours
- Constitution Requirement – 3 hours
- Written Communication – 6 hours
- Oral Communication – 3 hours
- Natural Sciences – 7 hours (from two disciplines, one to include a lab)
- Mathematics – 3 hours
- Humanities & Fine Arts – 9 hours (from at least two disciplines)
- Additional requirements – 5 hours (to include UI100* for native students)
- Civics examination

*BY101 Preparation for Pre-Professionals: Getting Ready to Go Above and Beyond may be taken in lieu of UI100.

SAMPLE FOUR-YEAR PLAN

	Fall Semester		Spring Semester	
	Course #	Hrs	Course #	Hrs
FIRST YEAR	UI100*	1	BY173/073	4
	BY163/063	4	CH186	3
	CH184/CH185	4	CH187	1
	MA116/137/39/140	3-5	EN100	3
	MI101	3	Additional Math course	3
	Total	15-17	Total	14
Milestone: achieve a target cumulative GPA of 3.2				
SECOND YEAR	BY283/083	4	BY310 or BY320	4
	BY389	2	CH343*	3
	CH341	4	CH344*	2
	CH342	1	General Education	3
	General Education	3	General Education	3
	Total	14	Total	15
Milestone: achieve a target cumulative GPA of 3.2				
THIRD YEAR	PH120/020	5	BY311	3
	Biology elective	3	PH121/021	5
	Biology upper-level elective	3	Experiential Learning Crs	2
	General Education	3	General Education	3
	General Education	3	General Education	3
	Total	17	Total	16
Milestone: take admission test and apply to professional program				
FOURTH YEAR	Biology upper-level elective	3	Biology upper-level elective	3
	General Education	3	Biology upper-level elective	3
	Elective	3	Elective	3
	Elective	3	Elective	3
	Elective	3	Elective	3
	Total	16	Total	15
Milestone: achieve a target cumulative GPA of 3.2				

A "Milestone" signifies a significant stage for a student in the completion of a degree.

Degree requirements for all students: a minimum of 120 credit hours, completion of the General Education program, and completion of 39 senior division hours (300-599). Refer to the Undergraduate Bulletin or Degree Works for additional graduation requirements for your program.

A minimum 2.0 GPA in the major and overall are required to graduate with a BS degree.

Professional School Admissions

Students seeking to attend professional schools in the biomedical sciences will be required to take an admissions test as specified below:

- Medical school: Medical College Admission Test (MCAT)
- Dental school: Dental Admission Test (DAT)
- Optometry School: Optometry Admission Test (DAT)

The curriculum for this degree is aligned to prepare students to be competitive applicants to biomedical professional schools and to perform well on the admissions tests. Students are advised to complete a substantial portion of the degree curriculum prior to attempting these admissions tests, typically after the third year of studies. Students should consult with their Biomedical Scholars advisor regarding preparation for these tests. The Biomedical Scholars advisors will advise students on the admissions process and timeline. Students should be aware that admission to these professional programs is very competitive, and their GPA will need to be substantially higher than the minimum required for graduation.

Revised
5/14/2026

