BIOLOGY, BACHELOR OF ARTS

Biology Major Requirements (B.A.)

(Also see Requirements for a Bachelor's Degree. (http://e-catalog.jhu.edu/arts-sciences/full-time-residential-programs/undergraduate-policies/academic-policies/requirements-for-a-bachelors-degree/))

The B.A. degree in biology is designed to provide students with a thorough grounding in modern biology, with special emphasis on the molecular aspects of the discipline.

All courses required for the biology major must be taken for a letter grade (not S/U) and be passed with a grade of C- or better with one exception. The department will accept one passing grade below C- in the senior year provided that the average for all formal lecture and laboratory courses is at least 2.0.

Code	Title	Credits
Mathematics		
AS.110.106	Calculus I (Biology and Social Sciences)	4
or AS.110.108	Calculus I (Physical Sciences & Engineering)	
AS.110.107	Calculus II (For Biological and Social Science)	4
or AS.110.109	Calculus II (For Physical Sciences and Engineering)	
or AS.171.113	Subatomic World	
Physics		
AS.171.101	General Physics: Physical Science Major I	4
or AS.171.103	General Physics I for Biological Science Majors	
or AS.171.107	General Physics for Physical Sciences Majors (AL)	
AS.171.102	General Physics: Physical Science Major II	4
or AS.171.104	General Physics/Biology Majors II	
or AS.171.108	General Physics for Physical Science Majors (AL)	
AS.173.111	General Physics Laboratory I	1
AS.173.112	General Physics Laboratory II	1
Chemistry		
AS.030.101 & AS.030.105	Introductory Chemistry I and Introductory Chemistry Laboratory I	4
AS.030.102 & AS.030.106	Introductory Chemistry II and Introductory Chemistry Laboratory II	4
or AS.030.103	Applied Chemical Equilibrium and Reactivity w/lab	
AS.030.205	Introductory Organic Chemistry I	4
AS.030.206	Organic Chemistry II	4
or AS.030.212	Honors Organic Chemistry II with Applications in Biochemistry and Medicine	
AS.030.225	Introductory Organic Chemistry Laboratory	3
or AS.030.227	Chemical Chirality: An Introduction in Organic Chem. Lab, Techniques	
Biology		
AS.020.151	General Biology I	3
AS.020.152	General Biology II	3
AS.020.303	Genetics	3
AS.020.340	Developmental Genetics Lab	2
AS.020.304	Molecular Biology	3
AS.020.306	Cell Biology	4
AS.020.316	Cell Biology Lab	1
AS.020.305	Biochemistry	4
AS.020.315	Biochemistry Project lab	2-3
or AS.250.253	Protein Engineering and Biochemistry Lab	
or AS.250.254	Protein Biochemistry and Engineering Laboratory	
AS.020.363	Developmental Biology	3
Electives		
At least three courses totaling at least seven credits (see POS-Tag BIOL-UL in the Schedule of Classes) from the courses approved by the Director of Undergraduate Studies. At least one course must be taught by the Biology Department (AS.020.xxx) and be a 2 or 3 credit course.		8
Total Credits		73-74

Sample Program of Study

First Year

First Semester	Credits	Second Semester	Credits
AS.030.101	3	AS.030.102	3
AS.030.105	1	AS.030.106	1
AS.110.106	4	AS.110.107	4
AS.020.151	3	AS.020.152	3
AS.020.153	1	AS.020.154	1
	12		12

Second Year

First Semester	Credits	Second Semester	Credits
AS.030.205	4	AS.020.303	3
AS.030.225 or 227	3	AS.020.340	2
		AS.030.206	4
	7		9

Third Year

First Semester	Credits	Second Semester	Credits
AS.020.305	4	AS.020.306	4
AS.020.315 or AS.250 253	1	AS.020.316	1
AS.171.103 or 101	4	AS.171.104 or 102	4
AS.173.111	1	AS.173.112	1
AS.020.304	3	Upper Level Biology Elective	2-3
	13		12-13

Fourth Year

First Semester	Credits	Second Semester	Credits
Upper Level Biology Elective	2-3	AS.020.363	3
		Upper Level Biology Elective	2-3
	2-3		5-6

Total Credits 72-75

Honors in Biology

Students completing the B.A. in Biology are eligible to receive their degree with honors.

The B.A. in biology with honors requires, in addition to the regular requirements for the B.A. in biology, a 3.5 GPA for natural sciences and quantitative studies courses, two semesters of research, a presentation of a poster describing the independent research, and a recommendation from the research sponsor.

The research requirement must be completed under the direction of a faculty member in a department associated with the Johns Hopkins

University or the Johns Hopkins Medical Institutions. If the student's research director for independent research is not a member of the Department of Biology, a Biology faculty member must serve as a sponsor and approve the recommendation from the research director.