

Curriculum for BS degree in Biological Sciences

First Year

First Semester		Hours	Second semester		Hours
23-101	General Biology I	4	23-102	General Biology II	4
24-101	General Chemistry I	4	24-102	General Chemistry II	4
01-101	English Composition I	3	01-102	English Composition II	3
25-xxx	Math	3	25-xxx	Math	3
23-191	University Seminar I	1	23-192	University Seminar II	1
			16-100	Fitness and Wellness	2
	Total hours	15		Total hours	17

Second Year

First Semester		Hours	Second semester		Hours
23-215	Cell Biology	4	23-210	Genetics	4
24-301	Organic Chemistry I	4	24-302	Organic Chemistry II	4
01-20x	Af. Am Lit. I or Am Lit. I	3	01-20x	Af. Am Lit. II or Am Lit. II	3
34-20x	Af. Am or Am History	3	xx-xxx	History/Social Science	3
23-299	Biol Sophomore Seminar	1	01-200	Speech	3
	Total hours	15		Total hours	17

Third Year

First Semester		Hours	Second semester		Hours
23-310	Molecular Biology	4	24-403	Biochemistry	4
23-xxx	Biology Elective	3/4	23-xxx	Biology Elective	3/4
23-xxx	Biology Elective	3/4	31-395	Global Societies	3
26-xxx	Physics I	4	26-xxx	Physics II	4
			23-399	Biology Junior Seminar	1
	Total hours	14-16		Total hours	15-16

Fourth Year

First Semester		Hours	Second semester		Hours
xx-xxx	Foreign Language I	3	xx-xxx	Foreign Language II	3
23-xxx	Biology Elective	3/4	23-xxx	Biology Elective	3/4
23-xxx	Biology Elective	3/4	xx-xxx	Arts and Humanities	3
xx-xxx	Open Elective	3/4	xx-xxx	Open Elective	3/4
23-451	Research (Senior Capstone I) *	3	23-499	Senior Capstone II	1
	Total hours	13-18		Total hours	14-18

* All Biology majors must complete an independent research project. Those who have completed a research project (e.g., 23-301) prior to the beginning of their senior year, and especially if that project was an internship at another institution, must present their data to their advisor in order to be exempted from the required Senior Capstone I course (23-451). Students may take 23-301 if they are doing a research project (3 credit hrs) with a biology faculty member. If the Capstone requirement is not completed by Senior year, student must register for 23-451 and do a research project. **All Biological Science majors are required to successfully complete Senior Capstone II (23-499).**

Please note: In order for a student to take either 23-210 or 23-215, that student must pass both 23-101 and 23-102 with a grade of "C" or better. In order for a student to take **any** 300 or 400 level Biology Department course, they must also pass both 23-210 and 23-215 with a grade of "C" or better. **These grade requirements take precedence over, and supercede any lesser specific prerequisites of all 300 or 400 level Biology electives.**

Biology Electives: Students must take **not less than 18 credits** of Biology courses from the elective lists below. The electives are organized according to subject area so that the student can obtain focused, in depth knowledge by selecting from one group, or a broader knowledge by selecting electives across groups. Only courses listed below can satisfy the Biology elective requirement.

Biological Systems	Cell/Molecular Biology	Organismal/Ecology
Principles of Physiology Neuroscience Human Anatomy Comparative Vert. Anatomy Developmental Biology Cell Morphogenesis Immunology	Microbiology Microbial Physiology & Ecology Advanced Cell Biology Advanced Molec.Genetics Histology Pharmacology Forensic and Investigative Biol	Behavior Ecology Plant Physiology (in AGNR) General Botany (in AGNR) Systematic Botany (in AGNR) Invertebrate Zoology

Courses in **bold** typeface should be taken in the **Junior year** by anyone whose goal is admission to Medical, Dental or other Health Professional School.

Courses that are underlined are highly recommended for any student applying to Graduate school in the Biomedical or Cell/Molecular Biology fields.

Biometrics (29-321) is strongly recommended as an open elective for all Biology majors, regardless of their career goals. In addition, **Introduction to Bioinformatics (35-301)** would be a valuable choice as an open elective for any student interested in Cell/Molecular Biology, Genetics or Microbiology. Note that neither of these courses will count towards the 38-credit Biological Sciences course total. However, with advance approval from the Department Chair, up to one Biotechnology course (21-301 and 21-302 [Biotechnology Labs], or 21-200 [Principles of Virology], or 21-400 [Adv. Biotechnology Instrumentation] can be used to meet the Biological Sciences elective requirement. Courses listed as offered “in AGNR” are acceptable as electives in Biological Sciences. Others, with advisor approval, can be substituted also.