Bachelor of Arts in Biological Sciences (BIOL BA) – Minimum Requirements

See Important Notes on the back of this form!

	BIOL CORE COURSES	Pre-requisites	Cr.
	BIOL 141 – Foundations of Biology: Cells, Energy & Organisms	MATH 150 or higher or placement in MATH151	4
	BIOL 142 – Foundations of Biology: Ecology & Evolution	MATH 150 or higher or placement in MATH151, BIOL 141	4
	BIOL 302 – Molecular & General Genetics (see note 3)	MATH 150 or higher or placement in MATH151, BIOL 141, BIOL 142, CHEM 101/123, CHEM 102/124 (co-requisite)	4
	BIOL 303 – Cell Biology	MATH 150 or higher or placement in MATH151, BIOL 141, BIOL 142, BIOL 302, CHEM 102	4
	BIOL 300L – Experimental Biology Laboratory	MATH 150 or higher or placement in MATH151, BIOL 141, BIOL 142, BIOL 302, CHEM 102, CHEM 102L	2
	BIOL ELECTIVES		
	Elective 1 - Choose one BIOL 275 - Microbiology BIOL 251+ BIOL252 - Human Anatomy & Phys. (see note 4) BIOL 304 - Plant Biology BIOL 305 – Animal Physiology BIOL 306 – Molecular Biology BIOL 307 - Human Physiology BIOL 313 – Introduction to Bioinformatics BIOL 430 - Biochemistry BIOL 442 – Developmental Biology BIOL 4XX - Any qualifying BIOL 4XX - (see note 5)	See catalog	3-4
	Elective 2 _____ - Any qualifying BIOL4XX lecture course (see note 5)	See catalog	4
	Laboratory Elective _____ - Any BIOL 3XXL or BIOL 4XXL lab course (not BIOL 300L or BIOL 499L)	BIOL 300L; See catalog for other prerequisites	2
	OTHER COURSES		
	CHEM 101 - Principles of Chemistry I	MATH 106 or higher	4
	CHEM 102 - Principles of Chemistry II	CHEM 101	4
	CHEM 102L - Introductory Chemistry Laboratory I	CHEM 101, CHEM 102 (pre- or co-requisite)	2
	CHEM 351 - Organic Chemistry I	CHEM 102	3
	PHYS 111 – Basic Physics I (see note 6)	None	4
	PHYS 112 – Basic Physics II (see note 6)	PHYS 111	4
	MATH 155 – Elementary Calculus I or MATH 151 – Calculus & Analytical Geometry I	MATH 106 MATH 150	4
	STAT 350 – Stats w/Applications in Bio Sci or STAT 355 – Intro Prob and Stats for Scientists/Engineers	MATH 150 or higher MATH 152	4

Important Notes:

1) Students must earn a "C" or better in all major courses AND course prerequisites.
2) At least half of the required BIOL courses and electives must be completed in residence: for the BIOL BA at least four of eight BIOL classes must be taken at UMBC.
3) BIOL 141, BIOL 142 and BIOL 302 are considered an academic sequence. Once you pass BIOL 302 you may not go back and repeat BIOL 141 or BIOL 142.
4) Students using BIOL251 and BIOL252 to fulfill Elective 1 must take BOTH classes.
5) BIOL 442, 495, 497, 499, and Lab classes may NOT be used to fulfill Elective 2. The BIOL 4XX elective class must be taken at UMBC.
6) Students may substitute PHYS121 for PHYS111, and PHYS122 for PHYS112, but should note that PHYS121/122 may not satisfy some professional school admission requirements.
7) BIOL BA majors receive 23 – 27 Upper Level Credits (3XX/4XX) from BIOL BA courses that may be applied to the University requirement of 45 Upper Level credits for graduation, and 55 – 57 credits toward the 120 total credits needed for graduation.
8) The Biological Sciences Department evaluates completion of major requirements based on COURSES completed, not CREDITS completed, because equivalent courses taken elsewhere may not be the same number of credits as the UMBC course they replace.
9) Students who are BIOC (Biochemistry and Molecular Biology) majors who wish to also pursue a BIOL BA degree may use Core BIOL, CHEM, MATH and PHYS courses from the BIOC major towards the BIOL BA degree, but MUST take separate electives for the two degrees (ie., no 'double-dipping for the electives). Please note, the university requires students taking two different Bachelor's degrees (like the BA and BS) to take a total of 150 credits.
10) Students may not pursue both a BIOE and BIOL degree since the BIOE degree contains the BIOL BA curriculum within it.
11) Under exceptional circumstances, the Department may waive or alter a BIOL major requirement. Students seeking to petition for a waiver must consult with their academic adviser, then may submit a 'Petition for Waiver/Substitution of Program Requirements' form, found here: https://biology.umbc.edu/undergrad/forms-links/.