

Name:

Campus ID:

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

55 – 57 credits (23-27 upper level credits)

*See Important Notes on the back of this form!*

Grade	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
	<b>BIOL ELECTIVES (see note 6 &amp; 7)</b>		
	<u>Elective 1 - Choose one</u> 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 375 - General Microbiology BIOL 430 - Biological Chemistry BIOL 442 - Developmental Biology BIOL 4XX - Any qualifying BIOL 4XX - (see note 5)	See catalog	3-4
	<u>Elective 2</u> _____ - Any qualifying BIOL4XX lecture course (see note 5)	See catalog	4
	<u>Laboratory Elective</u> _____ - Any BIOL 3XXL or BIOL 4XXL lab course, except BIOL 300L or BIOL 499L	BIOL 300L; See catalog for other prerequisites	2
	<b>OTHER COURSES</b>		
	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 8)	None	4
	PHYS 112 - Basic Physics II (see note 8)	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) Residency requirement:** At least four of the required BIOL courses and electives must be completed at UMBC.
- 3)** BIOL 141, BIOL 142 and BIOL 302 are considered an academic sequence. Once a student passes BIOL 302 they may not go back, and repeat BIOL 141 or BIOL 142.
- 4)** Students using BIOL 251 and BIOL 252 to fulfill Elective 1 must take BOTH classes. If BIOL 251 and BIOL 251 are used for BIOL residency (note 2), BOTH courses must be taken at UMBC in fulfillment of one residency course.
- 5)** The BIOL 4XX elective 2 class must be taken at UMBC. BIOL 442, 497H, 499, and Lab classes may NOT be used to fulfill Elective 2.
- 6)** See the [Undergraduate Catalog](#) for additional non-BIOL courses that may be used as electives for the major.
- 7)** The following courses are similar in content and only one in each grouping can be used towards major requirements: BIOL 305 and BIOL 307; BIOL 430, BTEC 430; BIOL 444 and BTEC 444; and BIOL 495 and BTEC 313.
- 8)** Students may substitute PHYS 121 for PHYS 111, and PHYS 122 for PHYS 112, but should note that PHYS 121/122 may not satisfy some professional school admission requirements.
- 9)** The Biological Sciences Department evaluates completion of major requirements based on COURSES completed, not CREDITS completed.
- 10)** Biochemistry and Molecular Biology (BIOC) 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 to take a total of 150 credits.
- 11)** Students may not pursue both a Biology Education (BIOE) and BIOL degree, since the BIOE degree contains the BIOL BA curriculum within it.
- 12)** 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/>.