BIOLOGICAL SCIENCES BASIC PROGRAM, SUPPORTING COURSES, & CORE

GENERAL BIOLOGY GENB (0404C)

A minimum of 120 credits earned and a 2.0 cumulative GPA is needed to meet University graduation requirements.
Major courses (Basic, Supporting, and Advanced) require a C- or better in each and a 2.0 average GPA.

1. BASIC PROGRAM 15 - 16 credits

Sem	Gr	Cr	
		4	BSCI105 Principles of Biology I *
		4	BSCI106 Principles of Biology II *
		3	BSCI207 Principles of Biology III *
		4	BSCI222 Principles of Genetics *
		1	Freshmen seminar UNIV100, GEMS100, HONR100, HLFC100, HEIP100 or ARHU105

*** These are required benchmark courses, see:**

http://bsci.umd.edu/benchmarks

2. SUPPORTING COURSES 32 credits

Sem	Gr	Cr	
		4	MATH130 OR MATH140 Calculus I *
		4	MATH131 OR MATH141 Calculus II *
		3	CHEM131 General Chemistry I *
		1	CHEM132 General Chemistry I lab *
		3	CHEM231 Organic Chemistry I *
		1	CHEM232 Organic Chemistry I lab *
		3	CHEM241 Organic Chemistry II *
		1	CHEM242 Organic Chemistry II lab *
		2	CHEM271 Gen Chem & Energetics *
		2	CHEM272 Bioanalytical Chem lab *
		4	PHYS131 OR PHYS141 Physics I
		4	PHYS132 OR PHYS142 Physics II

3. CORE General Education Requirements 27 – 33 credits

Fundamental studies math and CORE Math & Science are satisfied by the BSCI major requirements

Sem	Gr	Course	
			Fundamental Studies
			ENGL101 *
			Professional writing course (ENGL39X)
			Distributive Studies
			HL Literature
			HA Arts
			HO / HA / HL / IE Humanities Other / Interdisciplinary & Emerging Issues
			SH Social / Political History
			SB 1st Behavioral & Social Science
			SB 2nd SB / IE
			Advanced Studies 6 credits, 2 courses, 300 – 400 level, outside of major. Must be taken after 60 credits. 3 credits can be satisfied by approved Capstone (taken after 86 credits) or Honors Thesis
			Cultural Diversity may be a course that meets Distributive or Advanced Studies.

Summary of credits	
Required	Completed
Basic Program (15 – 16 cr.)	_____
Supporting Courses (32 cr.)	_____
CORE (27 – 33 cr.)	_____
Advanced Program (27 cr.)	_____
Elective	_____
Subtotal	_____
Duplicate credits Subtract from subtotal	_____
Total Credits (120 cr.)	_____

4. Options for Advanced Program Specialization Areas see reverse side for Advanced Program requirements

Cell Biology & Genetics	**General Biology**	Physiology & Neurobiology
Ecology & Evolution	Microbiology	Individualized Studies

NOTES:

Student name _____ UID_____

Advisor's signature _____ Date of audit _____

NOTE: The curriculum in Biological Sciences changes as faculty review and improve the program. The curriculum descriptions provided here are the latest versions. Your curriculum may look slightly different depending on when you declared the Biological Sciences major. Your academic advisor can provide you with the most accurate information on what curriculum you are following. Any questions can be referred to the Undergraduate Academic Programs Office, 301-405-6892.

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BIOLOGICAL SCIENCES ADVANCED PROGRAM **GENERAL BIOLOGY 0404C**

Grade of C- or better required in each course **27 minimum required credits**

At least two courses designated as **Lab** must be taken

1. Required courses 6 – 7 credits

Sem	Gr	Cr	Biochemistry
		3	BCHM461 Biochemistry **OR** BCHM463 Biochemistry of Physiology

Sem	Gr	Cr	Quantitative Course: one from below
		3	BIOM301 Introduction to Biometrics
		4	BSCI474 Mathematical Biology w/**Lab**
		3	STAT400 Applied Probability & Statistics
		3	STAT464 Introduction to Biostatistics
		3–4	MATH240 or higher w/ advisor approval

2. GENB Area Courses 20 – 21 credits

- At least one course from each of the categories 1, 2, and 3
- Lab courses offered separate from lecture must be taken with lecture as co- or pre-requisite
- Enough credits must be taken for at least 27 credits total in the Advanced Program

Sem	Gr	Cr	1. Genetics & Evolution
		3	BCHM465 Biochemistry III
		3	BSCI370 Principles of Evolution
		3	BSCI410 Molecular Genetics
		4	BSCI411 Bioinformatics and Integrated Genomics w/ **Lab**
		4	BSCI412 Microbial Genetics w/**Lab**
		3	BSCI414 Recombinant DNA **Lab**
		3	BSCI415 Molecular Genetics **Lab**
		3	BSCI416 Human Genetics
		4	BSCI470 Evolutionary Mechanisms
		3	BSCI471 Molecular Evolution
			2. Cell Biology, Development, Physiology
		3	BCHM462 Biochemistry II
		3	BCHM464 Biochemistry **Lab**
		4	BSCI330 Cell Biology & Physiology w/**Lab**
		3	BSCI342 Biology of Reproduction
		3	BSCI353 Principles of Neuroscience
		3	BSCI404 Cell Biology from a Biophysical Perspective
		3	BSCI417 Microbial Pathogenesis
		3	BSCI420 Cell Biology Lectures
		4	BSCI421 Cell Biology w/**Lab**
		3	BSCI422 Principles of Immunology
		2	BSCI423 Immunology **Lab**
		4	BSCI424 Pathogenic Microbiology w/**Lab**
		3	BSCI426 Membrane Biophysics
		3	BSCI430 Developmental Biology
		3	BSCI433 Biology of Cancer
		4	BSCI434 Mammalian Histology w/**Lab**
		3	BSCI437 General Virology
		4	BSCI440 Mammalian Physiology
		2	BSCI441 Mammalian Physiology **Lab**
		4	BSCI442 Plant Physiology w/**Lab**
		3	BSCI443 Microbial Physiology
		3	BSCI446 Neural Systems
		3	BSCI447 General Endocrinology
		3	BSCI451 Physical Chemistry for Biologists
		1	BSCI454 Neurobiology **Lab**

Sem	Gr	Cr	3. Ecology, Behavior & Organismal
		3	BSCI334 Mammalogy
		1	BSCI335 Mammalogy **Lab**
		4	BSCI337 Insect Biology w/**Lab**
		3	BSCI338B Marine Biology
		1	BSCI338Q Conservation Biology **Lab**
		3	BSCI348M Epidemiology of Microbial Pathogens
		3	BSCI360 Animal Behavior
		4	BSCI361 Principles of Ecology
		3	BSCI363 Biology of Conservation & Extinction
		3	BSCI373 Natural History Chesapeake Bay
		3	BSCI392 Biology of Extinct Animals
		1	BSCI393 Biology of Extinct Animals **Lab**
		3	BSCI394 Vertebrate Form and Function
		3	BSCI460 Plant Ecology
		2	BSCI461 Plant Ecology **Lab**
		3	BSCI462 Population Ecology
		3	BSCI464 Microbial Ecology
		3	BSCI465 Behavioral Ecology
		4	BSCI467 Freshwater Biology w/**Lab**
		3	BSCI473 Marine Ecology
		4	BSCI480 Arthropod Form and Function w/**Lab**
		4	BSCI481 Insect Diversity & Classification w/**Lab**
		4	BSCI483 Medical & Veterinary Entomology w/**Lab**
		3	BSCI493 Medicinal and Poisonous Plants
		3	BSCI494 Animal–Plant Interactions
			Additional courses (Optional)
		4	BSCI223 General Microbiology [1] **OR** BSCI283 Principles of Microbiology [1]
		1	**Departmental Honors Seminars** [2] BSCI378H and BSCI398H
			Special Topics Courses [3] see Testudo BSCI328, 338, 339, 348
			Dept. Research Credit [4]: BSCI379, 389, 399

[1] Credit will be given for either BSCI223 OR BSCI283. BSCI223/283 is a pre-requisite for some upper level BSCI courses. BSCI223/283 may count in the GENB Area credits but NOT as an upper-level lab.

[2] One credit of Departmental Honors seminar may be applied to major requirements. Additional Departmental Honors seminar credits count as electives.

[3] Special Topics courses allowed if specifically approved for upper level courses in GENB. See Testudo for specific information. See your advisor for applicability in a specific category above.

[4] Up to 3 credits of Departmental Research, including H versions, may be applied to major requirements. Additional research credits count as electives. Courses from other departments can be used with permission of advisor.

Total credits in Advanced Program: _____

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