

BIOLOGICAL SCIENCES BASIC PROGRAM, SUPPORTING COURSES, & CORE

CELL BIOLOGY AND GENETICS CEBG (0404A)

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	Summary of credits	
Fundamental Studies			Required	Completed
		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 1 st Behavioral & Social Science		
		SB 2 nd 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.		
			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.

BIOLOGICAL SCIENCES ADVANCED PROGRAM

Grade of C- or better required in each course

CELL BIOLOGY AND GENETICS**27 minimum required credits****0404A**At least two courses designated as **Lab** must be taken.**1. Required courses 16 - 17 credits**

Sem	Gr	Cr	
		3	BCHM461 Biochemistry I
		3	BCHM462 Biochemistry II
		4	BSCI330 Cell Biology & Physiology w/ Lab ¹
		3	BSCI410 Molecular Genetics
		3-4	BSCI420 Cell Biology Lectures OR BSCI421 Cell Biology Lectures w/ Lab

¹Starting Fall2007 BSCI330 replaces BSCI230. Students cannot get credit for both BSCI230 and BSCI330. Students who took BSCI230 prior to Fall2007 can include the course in the CEBG Advanced Program. BSCI230 does not count as an upper level lab.

2. CEBG Area courses 7 – 8 credits

- One course from the Cell Biology Group and one course from the Genetics group.
- Other credits can be taken from any group.
- Lab courses offered as separate credit must be taken with lecture as co- or pre-requisite.

Sem	Gr	Cr	Cell Biology Courses	Sem	Gr	Cr	Additional CEBG Courses
		3	BSCI353 Principles of Neuroscience			4	BSCI223 General Microbiology ² OR BSCI283 Principles of Microbiology ²
		3	BSCI404: Cell Biology from a Biophysical Perspective			2	BSCI427 Principles of Microscopy
		3	BSCI417 Microbial Pathogenesis ¹			4	BSCI434 Mammalian Histology w/ Lab
		3	BSCI422 Principles of Immunology ¹			3	BSCI437 General Virology
		2	BSCI423 Immunology Lab ¹			3	BSCI451 Physical Chemistry for Biologists
		3	BSCI426 Membrane Biophysics			3	BCHM464 Biochemistry Lab
		3	BSCI430 Developmental Biology			3	BIOM301 Introduction to Biometrics
		3	BSCI433 Biology of Cancer			3	STAT400 Applied Probability & Statistics
		4	BSCI442 Plant Physiology w/ Lab			3	STAT464 Introduction to Biostatistics
		3	BSCI443 Microbial Physiology ¹				
		1	BSCI454 Neurobiology Lab				
			Genetics Courses				
		4	BSCI411 Bioinformatics and Integrated Genomics w/ Lab (formerly BSCI380)				
		4	BSCI412 Microbial Genetics Lab ¹			var	Special Topics Courses ³
		3	BSCI414 Recombinant DNA Lab				BSCI328 Special Topics ENTM Depart.
		3	BSCI415 Molecular Genetics Lab				BSCI338 Special Topics BIOL Depart.
		3	BSCI416 Human Genetics				BSCI339 Selected Topics BIOL Depart.
		3	BCHM465 Biochemistry III				BSCI348 Special Topics CBMG Depart.
							Departmental Honors Seminar ⁴
						1	BSCI 378H and BSCI398H

Total CEBG Area credits _____

¹ BSCI223/283 is a pre-requisite for these upper level courses.² Credit will be given for either BSCI223 OR BSCI283. Credit cannot be granted for both courses. BSCI223/283 may count in the CEBG Area credits but NOT as an upper level lab.³ Special Topics courses are allowed if specifically approved for CEBG. See Testudo for applicability of particular courses.⁴ One credit of Honors seminar may be applied to major requirements. Additional Honors seminar credits count as electives.**3. Enrichment 3 credits** Enrichment Course: _____ Credits: _____ Semester: _____ Grade: _____**Minimum 3 credits from any 300- or 400-level BSCI, CHEM, or BCHM course.**

Courses from other departments can be used with permission of advisor.

Courses listed in the Advanced Program above can be used if they are not used to satisfy any category above.

Courses counted as enrichment do not satisfy the 300-or 400-level laboratory requirement.

Independent study or research credits, including H versions, are acceptable up to a maximum of 3 credits overall in the Advanced Program.

Total credits in Advanced Program: _____

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