

Roadmap: Biology - Molecular and Cellular Biology - Bachelor of Science

[AS-BS-BSCI-MCBI]

College of Arts and Sciences
Department of Biological Sciences
Catalog Year: 2010-2011

This roadmap is a recommended semester-by-semester plan of study for this major. However, courses and milestones designated as critical (in boldface and shaded areas) must be completed in the semester listed to ensure a timely graduation.

critical (in boldface and shaded areas) must be complete				isure a timely graduation.
Course Subject and Title	Credit Hours	Upper Division	Min. Grade	Important Notes
Semester One: [16 Credit Hours]				
Note: Students not placed into MATH 12002 (required in s	emester 3) should ta	ke MATH	11010 (Kent Core course) in first year of study
BSCI 10110 Biological Diversity	4			Fulfills Kent Core Basic Sciences
CHEM 10060 General Chemistry I	4			Fulfills Kent Core Basic Sciences
CHEM 10062 General Chemistry I Laboratory	1			Fulfills Kent Core Basic Sciences
US 10097 Destination Kent State: FYE	1			Not required for transfer students with 25 credits
Kent Core Requirement	6			See Kent Core Summary on page 2
Semester Two: [15 Credit Hours]				
BSCI 10120 Biological Foundations	4			Fulfills Kent Core Additional
CHEM 10061 General Chemistry II	4			Fulfills Kent Core Basic Sciences
CHEM 10063 General Chemistry II Laboratory	1			Fulfills Kent Core Basic Sciences
Kent Core Requirement	6			See Kent Core Summary on page 2
Semester Three: [13-16 Credit Hours]				
CHEM 20481 Basic Organic Chemistry I	3-4			
or CHEM 30481 Organic Chemistry CHEM 20482 Basic Organic Chemistry II (2)				Students may take CHEM 30284 Introductory
or CHEM 30475 Organic Chemistry Laboratory I (1)	1-3			Biological Chemistry instead of CHEM 20482 or
or CHEM 30482 Organic Chemistry II (3)				30482 with major advisor approval
BSCI 30140 Cell Biology	4			Fulfills Kent Core Mathematics and Critical
MATH 12002 Analytic Geometry and Calculus I	5			Reasoning
Semester Four: [17 Credit Hours]				
BSCI 30156 Elements of Genetics	3	-		
BSCI and/or CHEM and/or PHY elective	3	-		See note on page 2
MATH 12003 Analytic Geometry and Calculus II or MATH 30011 Basic Probability and Statistics	3-5			
Kent Core Requirement	6			See Kent Core Summary on page 2
General Elective (lower or upper division)	2			2 credits required if students take MATH 30011
Semester Five: [16-17 Credit Hours]				
Foreign Language (Elementary I)	4-5			
Kent Core Requirement	3			See Kent Core Summary on page 2
BSCI and/or CHEM and/or PHY Electives	9			See note on page 2
Semester Six: [15-16 Credit Hours]				
Required for pre-med students: MCAT if they plan to a	pply in su	mmer or fa	all of seni	or year (consult with advisor)
BSCI 40158 Molecular Biology	3			
Foreign Language (Elementary II)	4-5			
BSCI and/or CHEM and/or PHY Electives	8	•		See note on page 2
Semester Seven: [14 Credit Hours]				
BSCI 40163 Organic Evolution	3			
BSCI 40600 Writing in the Biological Sciences	1	•	С	Fulfills writing-intensive course requirement
Kent Core Requirement	2			See Kent Core Summary on page 2
BSCI and/or CHEM and/or PHY Electives	8	•		See note on page 2
				u .



[AS-BS-BSCI-MCBI]

College of Arts and Sciences Department of Biological Sciences

Catalog Year: 2010-2011

Critical requirements are boldface in shaded areas

Course Subject and Title	Credit Hours	Upper Division	Min. Grade	Important Notes
Semester Eight: [15 Credit Hours]				
BSCI and/or CHEM and/or PHY Elective	3			See note below
General Electives (upper division)	12			Number of credits required depends on meeting minimum 121 credit hours and 42 upperdivision hours

Graduation Requirements Summary

Minimum	Minimum Upper-	Minimum	Diversity Course	Writing-Intensive	Minimum		
Total Hours	Division Hours	Kent Core Hours	Global / Domestic	vvnung-mensive	Major GPA	Overall GPA	
121	42	36*	Kent Core or General Electives	BSCI 40600	2.0	2.0	

^{*} In addition to the Kent Cores, the College of Arts and Sciences requires for all its BS programs a minimum 8 credit hours of a foreign language.

Kent Core Summary

None Cold Summary						
Kent Core Categories	Important Notes	Remaining Credit Hours				
Additional (6 credit hours) Must be selected from two Kent Core categories	4 credits fulfilled in this major with BSCI 10120; may fulfill diversity requirement	2				
Basic Sciences (6-7 credit hours) Must include one laboratory	Fulfilled in this major with BSCI 10110, CHEM 10060, CHEM 10061, CHEM 10062 and CHEM 10063	0				
Composition (6-8 credit hours) ENG 11002, 11011, 21011; HONR 10197, 10297	Enrollment based on placement test	6-8				
Humanities and Fine Arts (9 credit hours) Minimum one course from humanities in Arts and Sciences category and minimum one course from fine arts category	May fulfill diversity requirement	9				
Mathematics and Critical Reasoning (3-5 credit hours)	Fulfilled in this major with MATH 12002	0				
Social Sciences (6 credit hours) Must be selected from two curricular areas	May fulfill diversity requirement	6				

Note: BSCI and/or CHEM and/or PHY electives (31 Credit Hours*) choose from the following:

16-31	PHY 13001 General College Physics I (4) and		
2.2	PHY 13021 General College Physics Laboratory I (1)	5	
2-3	or PHY 23101 General University Physics I (5)		
1	PHY 13002 General College Physics II (4) and		
	PHY 13022 General College Physics Laboratory II (1)	5	
1	or PHY 23102 General University Physics II (5)		
		PHY 13022 General College Physics Laboratory II (1)	

^{*}Maximum 4 credit hours of elective courses may be satisfactory/unsatisfactory graded.

**Must take any one of the following:

BSCI 40430 Animal Physiology is recommended for pre-med students to help with material for MCAT.

Maximum 6 credit hours of any combination of the following may be used to fulfilling this elective:

BSCI 30005 Career Pathways in Biology	1	BSCI 40192 Internship in Biological Sciences	3-6	
BSCI 40099 Senior Honors Thesis	1-3	BSCI 40196 Individual Investigation	1-3	
BSCI 40191 Senior Seminar	1			_

The following courses do not count as electives in the Biology major:

BSCI 10001 Human Biology	3	BSCI 30030 Human Physiology	4
BSCI 10002 Life on Planet Earth	3	BSCI 30050 Human Genetics	3
BSCI 20020 Biological Structure and Function	5	BSCI 40020 Biology of Aging	3

Kent Core

Students must complete a minimum 36 credit hours of the Kent Core. Certain courses required in programs and in student's major field may also fulfill the Kent Core. Honors equivalents shall satisfy the Kent Core. None of the courses on the Kent Core list may be taken with a pass/fail grade. Visit www.kent.edu/catalog/kent-core for course list.





[AS-BS-BSCI-MCBI]

College of Arts and Sciences
Department of Biological Sciences
Catalog Year: 2010-2011

Diversity Course Requirement

Students must complete a two-course diversity requirement, consisting of one with a domestic (U.S.) focus and one with a global focus. One course must come from the Kent Core. The second course may be taken as a second Kent Core, within a major or minor, or as a general elective; or, with dean's approval, by completing one semester of study in another country. Visit www.kent.edu/catalog/diversity for course list.

Writing-Intensive Course Requirement

Students must complete a one-course writing-intensive requirement in their major and earn minimum C (2.00) grade. Visit www.kent.edu/catalog/wic for course list.

Upper-Division Requirement

Students must complete a minimum 39 upper-division (numbered 30000 to 49999) credit hours of coursework. Programs in the College of Arts and Sciences require a minimum of 42 hours of upper-division coursework.

Foreign Language

Visit www.kent.edu/catalog/foreign-languages for course list.

