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



AS-BS-BSCI-MCBI College of Arts and Sciences

Department of Biological Sciences
Catalog Year 2014-2015

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

Critical	Course Subject and Title	Credit Hours	Upper Div.	Min. Grade	Major GPA	Туре	Term Taken
Semest	er One [16 Credits]	riouro	D111	Oraco	OI /		
	tudents not placed into MATH 12002 (required in semester 3) should	take MAT	H 11010 (Kent Core	e course)	in first yea	ar of study
!	BSCI 10110 Biological Diversity	4	· · · · · · · · · · · · · · · · · · ·			KBS	•
!	CHEM 10060 General Chemistry I	4				KBS	
!	CHEM 10062 General Chemistry I Laboratory	1				KBS	
	US 10097 Destination Kent State: First Year Experience ¹	1					
	Kent Core Requirement	3					
	Kent Core Requirement	3					
emest	er Two [15 Credits]						
!	BSCI 10120 Biological Foundations	4				KAD	
<u>!</u>	CHEM 10061 General Chemistry II	4				KAD	
!	CHEM 10063 General Chemistry II Laboratory	1				KBS	
	Kent Core Requirement	3					
	Kent Core Requirement	3					1
emesi	er Three [16 Credits] BSCI 30140 Cell Biology	4			_		
	CHEM 20481 Basic Organic Chemistry I (3)	4					
!	or CHEM 30481 Organic Chemistry I (4)	3-4					
!	MATH 12002 Analytic Geometry and Calculus I	5				KMC	
i	Biology, Chemistry, Physics Electives ²	3				TUILO	
i	Organic Chemistry Option ³	1					
emest	er Four [14 Credits]	-					
!	BSCI 30156 Elements of Genetics	3					
!	MATH 12003 Analytic Geometry and Calculus II (3)	3-5			-		
•	or MATH 30011 Basic Probability and Statistics (5)	3-3					
!	Organic Chemistry Option ³	0-3					
	Kent Core Requirement	3					
	Kent Core Requirement	3					
	General Electives ⁴	2					
emest	er Five [16 Credits]						
	Biology, Chemistry, Physics Electives ²	9					
	Foreign Language ⁵ Kent Core Requirement	4-5 3					
omost	er Six [15 Credits]	3					
GIIIGSU	BSCI 40158 Molecular Biology	3					
	Biology, Chemistry, Physics Electives ²	8	-		-		
	Foreign Language ⁵	4-5			-		
emest	er Seven [14 Credits]	. 0					
	BSCI 40163 Evolution	3					
	BSCI 40600 Writing in the Biological Sciences	1	-	С	•	WIC	
	Biology, Chemistry, Physics Electives ²	8		_		-	
	General Electives ⁴	2					
em <u>es</u> t	er Eight [14 Credits]						
emest	er Eight [14 Credits] Biology, Chemistry, Physics Electives ² General Electives ⁴	3 11					

Graduation Requirements Summary

Minimum Total Hours	Minimum Unner Division Hours	Minimum Kent Core Hours	Minimum		
Willimum Total Hours	Minimum Upper-Division Hours	Millimum Kent Core nours	Major GPA	Overall GPA	
120	42	36	2.000	2.000	

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KENT STATE

College of Arts and Sciences
Department of Biological Sciences
Catalog Year 2014-2015

PROGRAM NOTES:

1. US 10097 is not required of transfer students with 25 credits or students age 21+ at time of admission.

2. Biology, Chemistry, Physics Electives (31 credits)

Choose from the following:					
BSCI Biology courses * (in consultation with advisor) (16-31)	PHY 13001 General College Physics I (4) and				
CHEM 20482 Basic Organic Chemistry II (2)	PHY 13021 General College Physics Laboratory I (1)				
or CHEM 30482 Organic Chemistry II (3)	or PHY 23101 General University Physics I (5)				
CHEM 30475 Organic Chemistry Laboratory I (1)	PHY 13002 General College Physics II (4) and				
CHEM 30476 Organic Chemistry Laboratory II (1)	PHY 13022 General College Physics Laboratory II (1)				
	or PHY 23102 General University Physics II (5)				
* Students MUST choose one or more courses (maximum 6 credit hours of any combination) from the following as part of the 31-credit electives					
(enrollment in these course must be determined with a faculty advisor). No more than 4 credit hours may be S/U graded.					
BSCI 30005 Career Pathways in Biology (1)	BSCI 40192 Internship in Biological Sciences (3-4) [ELR]				
BSCI 40099 Senior Honors Thesis (1-3) [ELR]	BSCI 40196 Individual Investigation (1-3) [ELR]				
BSCI 40191 Senior Seminar (1)					

3. Organic Chemistry Option (1-3 credits) – If CHEM 30475 is chosen, must be taken in Semester Three. If CHEM 20482 or CHEM 30482 is chosen, must be taken in Semester Four.

Choose from the following:	
CHEM 20482 Basic Organic Chemistry II (2) *	CHEM 30475 Organic Chemistry Laboratory I (1)
CHEM 30482 Organic Chemistry II (3) *	*CHEM 20482 or CHEM 30482 may be substituted with CHEM 30284 Introductory.
	Biological Chemistry with faculty advisor approval

- 4. Number of general elective credits required depends on meeting minimum 120 credit hours and 42 upper-division hours.
- 5. Fulfills College General Requirement

DEPARTMENT NOTES:

1. All courses taken from the list of major program requirements are used in the calculation of the major GPA.

2. The following courses may **NOT** be used in the elective category for majors or minors in the Department of Biological Sciences:

BSCI 10001 Human Biology	BSCI 10002 Life on Planet Earth
BSCI 10003 Laboratory Experience in Biology	BSCI 10100 Anatomy for Veterinary Technicians
BSCI 11001 Anatomy for Physical and Occupational Therapy	BSCI 11010 Anatomy and Physiology I for Allied Health
BSCI 11020 Anatomy and Physiology II for Allied Health	BSCI 16001 Horticultural Botany
BSCI 20020 Biological Structure and Function	BSCI 20021 Basic Microbiology
BSCI 20022 Basic Microbiology Laboratory	BSCI 26002 Ecological Principles of Pest Management
BSCI 26003 Plant Identification and Selection I	BSCI 26004 Plant Identification and Selection II
BSCI 30050 Human Genetics	BSCI 40020 Biology of Aging

University Requirements Summary

Туре	Categories	Course(s) Satisfying Category	Remaining Requirements
KCM	Kent Core I. Composition Enrollment based on placement test	visit www.kent.edu/catalog/kent-core	6
	Kent Core II. Mathematics and Critical Reasoning Enrollment based on placement test	MATH 12002	fulfilled
KHU	Kent Core III. Humanities Minimum one course from humanities in Arts and Sciences; may fulfill diversity requirement	visit www.kent.edu/catalog/kent-core	3
	Kent Core IV. Fine Arts Minimum one course from the fine arts; may fulfill diversity requirement	visit www.kent.edu/catalog/kent-core	3
	Kent Core V. Humanities or Fine Arts One additional course from either the humanities or fine arts category, may fulfill diversity requirement	visit www.kent.edu/catalog/kent-core	3
KSS	Kent Core VI. Social Sciences Must be selected from two curricular areas; may fulfill diversity requirement	visit www.kent.edu/catalog/kent-core	6
KBS	IVIUST INCLUDE ONE JANOTATORY	BSCI 10110, BSCI 10120	fulfilled
KAD	Kent Core VIII. Additional May fulfill diversity requirement	CHEM 10060, CHEM 10061, CHEM 10062, CHEM 10063,	fulfilled
DD	Domestic Diversity Course Requirement Either domestic or global diversity must be from Kent Core	visit www.kent.edu/catalog/diversity	one course
DG	Global Diversity Course Requirement Either domestic or global diversity must be from Kent Core	visit www.kent.edu/catalog/diversity	one course
	Experiential Learning Requirement Either course or non-course experience approved by the appropriate faculty member	visit www.kent.edu/catalog/elr	one course or activity
WIC	Writing-Intensive Course Requirement Minimum C (2.000) grade	BSCI 40600	fulfilled