

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	Type	Term Taken
<b>Semester One [17 Credits]</b>							
!	<b>BSCI 10120 Biological Foundations</b>	4			■	KBS	
!	<b>CHEM 10060 General Chemistry I and CHEM 10062 General Chemistry I Laboratory or CHEM 10960 Honors General Chemistry</b>	5			■	KBS	
!	<b>MATH 12021 Calculus for Life Sciences<sup>1</sup></b>	4			■	KMC	
	US 10097 Destination Kent State: First Year Experience <sup>2</sup>	1					
	Kent Core Requirement	3					
<b>Semester Two [14 Credits]</b>							
!	<b>CHEM 10061 General Chemistry II and CHEM 10063 General Chemistry II Laboratory or CHEM 10961 Honors General Chemistry</b>	5			■	KBS	
!	<b>MATH 12022 Probability and Statistics for Life Sciences<sup>1</sup></b>	3			■		
	Kent Core Requirement	3					
	Kent Core Requirement	3					
<b>Semester Three [15 Credits]</b>							
!	<b>BSCI 30156 Elements of Genetics</b>	3	■		■		
!	<b>CHEM 30475 Organic Chemistry Laboratory I<sup>3</sup></b>	1	■		■		
!	<b>CHEM 30481 Organic Chemistry I<sup>3</sup></b>	3	■		■		
!	<b>PHY 13001 General College Physics I</b>	4			■	KBS	
!	<b>PHY 13021 General College Physics Laboratory I</b>	1			■	KBS	
	Kent Core Requirement	3					
<b>Semester Four [15 Credits]</b>							
!	<b>BSCI 30140 Cell Biology</b>	4	■		■		
!	<b>CHEM 30301 Inorganic Chemistry I<sup>4</sup></b>	2	■		■		
!	<b>CHEM 30476 Organic Chemistry Laboratory II<sup>5</sup></b>	1	■		■		
!	<b>CHEM 30482 Organic Chemistry II<sup>5</sup></b>	3	■		■		
!	<b>PHY 13002 General College Physics II</b>	4			■	KBS	
!	<b>PHY 13022 General College Physics Laboratory II</b>	1			■	KBS	
<b>Semester Five [14 Credits]</b>							
!	<b>BSCI 40430 Animal Physiology</b>	3	■		■		
!	<b>CHEM 40567 Basic Concepts of Physical Chemistry<sup>6</sup></b>	4	■		■		
	Foreign Language <sup>7</sup>	4 - 5					
	Kent Core Requirement	3					
<b>Semester Six [16 Credits]</b>							
!	<b>BSCI 30171 General Microbiology</b>	4	■		■		
!	<b>CHEM 40245 Biochemical Foundations of Medicine<sup>5</sup></b>	4	■		■		
!	<b>CHEM 40568 Elementary Physical Chemistry Laboratory<sup>4</sup></b>	1	■		■		
	Foreign Language <sup>7</sup>	4 - 5	■				
	Kent Core Requirement	3					
<b>Semester Seven [14 Credits]</b>							
!	<b>CHEM 30105 Analytical Chemistry I<sup>6</sup></b>	3	■		■		
!	<b>CHEM 30107 Analytical Chemistry Laboratory I<sup>8</sup></b>	1	■		■	WIC	
!	<b>CHEM 40248 Advanced Biological Chemistry<sup>6</sup></b>	3	■		■		
	Concentration electives <sup>9</sup>	2			■		
	Kent Core Requirement	3					
	General Elective <sup>10</sup>	2					
<b>Semester Eight [15 Credits]</b>							
!	<b>CHEM 40251 Advanced Biological Chemistry Laboratory<sup>8</sup></b>	2	■		■	WIC	
!	<b>CHEM 40263 Physical Biochemistry I<sup>4</sup></b>	3	■		■		
	Concentration electives <sup>9</sup>	3	■		■		
	General Elective <sup>10</sup>	7					

### Graduation Requirements Summary

Minimum Total Hours	Minimum Upper-Division Hours	Minimum Kent Core Hours	Minimum	
			Major GPA	Overall GPA
120	42	36	2.000	2.000

1. The following three courses may be taken as a package instead of MATH 12021 and 12022: MATH 12002 Analytic Geometry and Calculus I (5), MATH 12003 Analytic Geometry and Calculus II (5) and MATH 30011 Basic Probability and Statistics (3).

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

3. Offered in fall and summer only

4. Offered in spring only



5. Offered in spring and summer only
6. Offered in fall only
7. Fulfills College General Requirement
8. A minimum C (2.000) grade must be earned in CHEM 40248 (offered in fall only) or CHEM 40251 (offered in spring only) to fulfill the writing-intensive requirement.

**9. Concentration electives (5 credits)**

**Choose from the following:**

BSCI 30518 Vertebrate Anatomy (4)	BSCI 40174 Immunology (3)
BTEC 40191 Seminar: Recent Developments in Biotechnology (1)	BTEC 40220 Bioinformatics (3)
CHEM 30106 Analytical Chemistry II (2)	CHEM 40295 Special Topics in Biochemistry (1 - 3)
CHEM 40302 Inorganic Chemistry II (2)	CHEM 40365 Biological Inorganic Chemistry (3)
CHEM 40477 Intermediate Organic Chemistry Laboratory (1)	CHEM 40483 Intermediate Organic Chemistry (1)
CHEM 40796 Individual Investigation (1 - 8)	

10. Lower or upper-division credit hours. Credits required depends on meeting minimum 120 credit hours and minimum 42 upper-division credit hours.

The following elective courses are recommended: ECON 42086, PSYC 40111, PSYC 41363, SOC 42563

**University Requirements Summary**

Type	Categories	Course(s) Satisfying Category	Remaining Requirements
KCM	<b>Kent Core I. Composition</b> Enrollment based on placement test	visit <a href="http://www.kent.edu/catalog/kent-core">www.kent.edu/catalog/kent-core</a>	6
KMC	<b>Kent Core II. Mathematics and Critical Reasoning</b> Enrollment based on placement test	MATH 12021 is approved as proficiency to fulfill requirement	3
KHU	<b>Kent Core III. Humanities</b> Minimum one course from humanities in Arts and Sciences; may fulfill diversity requirement	Recommended: PHIL 21001	3
KFA	<b>Kent Core IV. Fine Arts</b> Minimum one course from the fine arts; may fulfill diversity requirement	visit <a href="http://www.kent.edu/catalog/kent-core">www.kent.edu/catalog/kent-core</a>	3
KFH	<b>Kent Core V. Humanities or Fine Arts</b> One additional course from either the humanities or fine arts category, may fulfill diversity requirement.	visit <a href="http://www.kent.edu/catalog/kent-core">www.kent.edu/catalog/kent-core</a>	3
KSS	<b>Kent Core VI. Social Sciences</b> Must be selected from two curricular areas; may fulfill diversity requirement	Recommended: ECON 22060, PYSC 11762, SOC 12050	6
KBS	<b>Kent Core VII. Basic Sciences</b> Must include one laboratory	BSCI 10120, CHEM 10060, CHEM 10062	fulfilled
KAD	<b>Kent Core VIII. Additional</b> May fulfill diversity requirement	CHEM 10061, PHY 13001	fulfilled
DD	<b>Domestic Diversity Course Requirement</b> Either domestic or global diversity must be from Kent Core	visit <a href="http://www.kent.edu/catalog/diversity">www.kent.edu/catalog/diversity</a>	one course
DG	<b>Global Diversity Course Requirement</b> Either domestic or global diversity must be from Kent Core	visit <a href="http://www.kent.edu/catalog/diversity">www.kent.edu/catalog/diversity</a>	one course
ELR	<b>Experiential Learning Requirement</b> Either course or non-course experience approved by the appropriate faculty member	visit <a href="http://www.kent.edu/catalog/elr">www.kent.edu/catalog/elr</a>	one course or activity
WIC	<b>Writing-Intensive Course Requirement</b> Minimum C (2.000) grade	CHEM 30107, CHEM 40251	fulfilled