

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.

Course Subject and Title	Credit Hours	Upper Division	Min. Grade	Important Notes
Semester One: [17 Credit Hours]				
BSCI 10120 Biological Foundations	4			Fulfills Kent Core Basic Sciences
CHEM 10060 General Chemistry I or CHEM 10960 Honors General Chemistry	4-5			Fulfills Kent Core Basic Sciences
CHEM 10062 General Chemistry I Laboratory	0-1			Take only if CHEM 10060 is selected
MATH 12021 Calculus for Life Sciences	4			Approved as proficiency to fulfill Kent Core Mathematics and Critical Reasoning; see note 1 on page 2
US 10097 Destination Kent State: FYE	1			Not required for transfer students with 25 credits
Kent Core Requirement	3			See Kent Core Summary on page 2
Semester Two: [14 Credit Hours]				
CHEM 10061 General Chemistry II or CHEM 10961 Honors General Chemistry	4-5			If CHEM 10060 was taken; select CHEM 10061; If CHEM 10960 was taken, select CHEM 10961
CHEM 10063 General Chemistry II Laboratory	0-1			Take only if CHEM 10061 is selected
MATH 12022 Probability and Statistics for Life Sciences	3			See note 1 on page 2
Kent Core Requirement	6			See Kent Core Summary on page 2
Semester Three: [15 Credit Hours]				
BSCI 30156 Elements of Genetics	3	■		
CHEM 30475 Organic Chemistry Laboratory I	1	■		
CHEM 30481 Organic Chemistry I	3	■		Offered in fall only
PHY 13001 General College Physics I	4			Fulfills Kent Core Additional
PHY 13021 General College Physics Laboratory I	1			Fulfills Kent Core Basic Sciences
Kent Core Requirement	3			See Kent Core Summary on page 2
Semester Four: [15 Credit Hours]				
BSCI 30140 Cell Biology	4			
CHEM 30301 Inorganic Chemistry I	2	■		Offered in spring only
CHEM 30476 Organic Chemistry Laboratory II	1	■		Offered in spring only
CHEM 30482 Organic Chemistry II	3	■		Offered in spring only
PHY 13002 General College Physics II	4			Fulfills Kent Core Basic Sciences
PHY 13022 General College Physics Laboratory II	1			
Semester Five: [14-15 Credit Hours]				
BSCI 40430 Animal Physiology	3	■		
CHEM 40567 Basic Concepts of Physical Chemistry	4	■		Offered in fall only
Foreign Language (Elementary I)	4-5			
Kent Core Requirement	3			See Kent Core Summary on page 2
Semester Six: [16-17 Credit Hours]				
BSCI 30171 General Microbiology	4	■		
CHEM 40245 Biochemical Foundations of Medicine	4	■		Typically offered in spring and summer only
CHEM 40568 Elementary Physical Chemistry Laboratory	1	■		Offered in spring only
Foreign Language (Elementary II)	4-5			
Kent Core Requirement	3			See Kent Core Summary on page 2

Critical requirements are boldface in shaded areas

Course Subject and Title	Credit Hours	Upper Division	Min. Grade	Important Notes
Semester Seven: [14 Credit Hours]				
CHEM 30105 Analytical Chemistry I	3	■		Offered in fall only
CHEM 30107 Analytical Chemistry Laboratory I	1	■		Fulfills writing-intensive course requirement; offered in fall only; see note 2 below
CHEM 40248 Advanced Biological Chemistry	3	■		Offered in fall only
Kent Core Requirement	5			See Kent Core Summary below
Concentration Elective (upper division)	2	■		See note 3 on page 3
Semester Eight: [16 Credit Hours]				
CHEM 40251 Advanced Biological Chemistry Laboratory	2	■		Fulfills writing-intensive course requirement offered in spring only; see note 2 below
CHEM 40263 Physical Biochemistry	3	■		Offered in spring only
Concentration Elective (upper division)	3	■		See note 3 on page 3
General Electives (lower or upper division)	8			Number of credits required depends on meeting minimum 121 credit hours and 42 upper-division hours; see note 4 on page 3

Graduation Requirements Summary

Minimum Total Hours	Minimum Upper-Division Hours	Minimum Kent Core Hours	Diversity Course Global / Domestic	Writing-Intensive	Minimum Major GPA	Minimum Overall GPA
121	42	36*	Kent Core or General Electives	CHEM 30107 or CHEM 40251	2.0	2.0

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

Kent Core Summary

Kent Core Categories	Important Notes	Remaining Credit Hours
Additional (6 credit hours) <i>Must be selected from two Kent Core categories</i>	4 credits fulfilled in this major with PHY 13001; recommended: COMM 15000 Introduction to Human Communication	2
Basic Sciences (6-7 credit hours) <i>Must include one laboratory</i>	Fulfilled in this major with BSCI 10120, CHEM 10060, CHEM 10061, PHY 13002, PHY 13021 and PHY 13022	0
Composition (6-8 credit hours) <i>ENG 11002, 11011, 21011; HONR 10197, 10297</i>	Enrollment based on placement test	6-8
Humanities and Fine Arts (9 credit hours) <i>Minimum one course from humanities in Arts and Sciences category and minimum one course from fine arts category</i>	Recommended: PHIL 21001 Introduction to Ethics	9
Mathematics and Critical Reasoning (3-5 credit hours)	Fulfilled in this major with MATH 12021	0
Social Sciences (6 credit hours) <i>Must be selected from two curricular areas</i>	Recommended: ECON 22060 Principles of Microeconomics; PSYC 11762 General Psychology; SOC 12050 Introduction to Sociology	6

Note 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).

Note 2: A minimum C grade must be earned in either CHEM 30107 or CHEM 40251 to fulfill the writing-intensive requirement.

Note 3: Concentration electives (5 credit hours), choose from the following:

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

Note 4: The following elective courses are recommended: ECON 42086 Economics of Health Care; PSYC 40111 Abnormal Psychology; PSYC 41363 Biopsychology; SOC 42563 Sociology of Health and Health Care

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.

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.

