

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	Min. Grade	Major GPA	Attribute	Notes
<b>Semester One [15 Credits]</b>						
!	CHEM 10060 General Chemistry I and CHEM 10062 General Chemistry I Laboratory or CHEM 10960 Honors General Chemistry	5		■	KBS KBS	
!	MATH 11010 Algebra for Calculus	3		■	KMC	
	US 10097 Destination Kent State: First Year Experience <sup>1</sup>	1				
	Kent Core Requirement	3				
	Kent Core Requirement	3				
<b>Semester Two [14 Credits]</b>						
!	CHEM 10061 General Chemistry II and CHEM 10063 General Chemistry II Laboratory or CHEM 10961 Honors General Chemistry	5		■	KBS KBS	
!	MATH 11022 Trigonometry	3		■	KMC	
	Kent Core Requirement	3				
	Kent Core Requirement	3				
<b>Semester Three [18 Credits]</b>						
!	CHEM 20481 Basic Organic Chemistry I <sup>2</sup> (4) or CHEM 30481 Organic Chemistry I <sup>2</sup> (3)	3 - 4		■		
!	CHEM 30475 Organic Chemistry Laboratory I <sup>2</sup>	1		■	ELR	
!	PHY 13001 General College Physics I	4		■	KBS	
!	PHY 13021 General College Physics Laboratory I	1		■	KBS	
!	MATH 12002 Analytic Geometry and Calculus I	5		■	KMC	
	Foreign Language <sup>3</sup>	4 - 5				
<b>Semester Four [14 Credits]</b>						
!	CHEM 20482 Basic Organic Chemistry II <sup>4</sup> (2) or CHEM 30482 Organic Chemistry II <sup>4</sup> (3)	2-3		■		
!	CHEM 30301 Inorganic Chemistry I <sup>5</sup>	2		■		
!	CHEM 30476 Organic Chemistry Laboratory II <sup>6</sup>	1		■		
!	PHY 13002 General College Physics II <sup>3</sup>	4		■	KBS	
!	PHY 13022 General College Physics Laboratory II	1		■	KBS	
	Foreign Language <sup>3</sup>	4 - 5				
<b>Semester Five [17 Credits]</b>						
!	CHEM 40567 Basic Concepts of Physical Chemistry <sup>7</sup>	4		■		
	CHEM 30105 Analytical Chemistry I <sup>7</sup>	3		■		
	CHEM 30107 Analytical Chemistry Laboratory I	1	C <sup>8</sup>	■	WIC	
	Foreign Language <sup>3</sup>	3 - 5				
	Kent Core Requirement	3				
	Kent Core Requirement	3				
<b>Semester Six [14 Credits]</b>						
	CHEM 30284 Introductory Biological Chemistry <sup>6</sup>	4		■		
	CHEM 40568 Elementary Physical Chemistry Laboratory <sup>5</sup>	1		■		
	Foreign Language <sup>3</sup>	3 - 5				
	Kent Core Requirement	3				
	College General Requirement <sup>9</sup>	3				
<b>Semester Seven [15 Credits]</b>						
!	CHEM 40302 Inorganic Chemistry II <sup>7</sup>	2		■		
	CHEM Electives <sup>10</sup>	1 - 3		■		
	General Electives <sup>11</sup>	12				
<b>Semester Eight [12 Credits]</b>						
	General Electives <sup>11</sup>	12				

### Graduation Requirements Summary

Minimum Total Hours	Minimum Upper-Division Hours 30000 – 40000 level course	Minimum Kent Core Hours	Minimum	
			Major GPA	Overall GPA
120	42	36	2.000	2.000

1. US 10097 is not required of transfer students with 25 credits (excluding College Credit Plus and dual-enrollment) or students age 21+ at time of admission.
2. Offered in fall and summer only
3. Fulfills College General Requirements.
4. If CHEM 20481 was taken, select CHEM 20482; If CHEM 30481 was taken, select CHEM 30482. Courses typically offered in spring and summer only.
5. Offered in spring only
6. Offered in spring and summer only
7. Offered in fall only
8. A minimum C (2.000) grade must be earned in CHEM 30107 to fulfill the writing-intensive requirement.
9. One additional course taken from the Kent Core Social Sciences courses in the following Arts and Sciences disciplines: Anthropology (ANTH), Applied Conflict Management (CACM), Geography (GEOG), Criminology and Justice Studies (CRIM), Political Science (POL), Psychology (PSYC) or Sociology (SOC). The course may not be from the student's major.
10. CHEM Electives (1-3 credits)

**Choose from the following:**

CHEM 30050 Introduction to Materials Chemistry (2)	CHEM 30106 Analytical Chemistry II (2)
CHEM 40248 Advanced Biological Chemistry (3)	CHEM 40303 Inorganic Chemistry III (2)
CHEM 40477 Intermediate Organic Chemistry Laboratory (1)	CHEM 40483 Intermediate Organic Chemistry (1)
CHEM 40796 Individual Investigation (1 - 2)	Chemistry Department-approved electives (1 - 3)

11. 14-22 upper-division credit hours. Number of credits required depends on meeting minimum 120 credit hours and minimum 42 upper-division credit hours.

**Foreign Language Note:** Students pursuing a Bachelor of Arts degree in the College of Arts and Sciences must have the equivalent of Elementary I and II in any language, plus one of the following options:

- a. Intermediate I and II of the same language
- b. Elementary I and II of a second language
- c. Any combination of two courses from the following list:
  - i. Intermediate I of the same language
  - ii. MCLS 10001 Introduction to Structural Concepts for Language Students
  - iii. MCLS 20000 Global Literacy and Cultural Awareness
  - iv. MCLS 20091 Seminar: Global Literacy Case Studies
  - v. MCLS 21417 Multiculturalism in Today's Germany
  - vi. MCLS 22217 Diversity in Today's Russia
  - vii. MCLS 23217 The Francophone Experience
  - viii. MCLS 28404 The Latin American Experience
  - ix. MCLS 28405 The Spanish Experience

All students with prior foreign language experience should take the foreign language placement test to determine the appropriate level at which to start. Some students may begin their university foreign language experience beyond the Elementary I level and will complete the requirement with fewer credit hours and fewer courses. This may be accomplished by: (1) passing a course beyond Elementary I through Intermediate II level or (2) receiving credit through Credit by Exam (CBE), the College Level Examination Program (CLEP), the Advanced Placement (AP) exam or credit through the International Baccalaureate (IB) program; or (3) being designated a native speaker of a non-English language (consult with the College of Arts and Sciences Advising Office for additional information). When students complete the requirement with fewer than 14 credit hours and four courses, they will complete remaining hours with general electives.

**University Requirements:** Bachelor's degree-seeking students must meet Kent Core (general education requirements), diversity, writing-intensive and experiential learning requirements. For more information about these requirements, please read the following sections in the University Catalog: Kent Core – [www.kent.edu/catalog/kent-core](http://www.kent.edu/catalog/kent-core); Diversity Course Requirement – [www.kent.edu/catalog/diversity](http://www.kent.edu/catalog/diversity); Writing-Intensive Course Requirement – [www.kent.edu/catalog/wic](http://www.kent.edu/catalog/wic); Experiential Learning Requirement – [www.kent.edu/catalog/elr](http://www.kent.edu/catalog/elr).

**Attribute Legend:** **DD** Diversity–Domestic; **DG** Diversity–Global; **ELR** Experiential Learning; **KAD** Kent Core Additional; **KBS** Kent Core Basic Sciences; **KCM** Kent Core Composition; **KFA** Kent Core Fine Arts; **KHU** Kent Core Humanities; **KMC** Kent Core Mathematics and Critical Reasoning; **KSS** Kent Core Social Sciences; **WIC** Writing Intensive