CHEMISTRY - B.S.

College of Arts and Sciences
Department of Chemistry and Biochemistry
www.kent.edu/chemistry

About This Program

Kent State's Bachelor of Science in Chemistry program offers an exciting opportunity to pursue a dynamic career in the field. With a rigorous curriculum and hands-on experience, you'll gain the skills and knowledge needed to excel in a wide range of industries, including pharmaceuticals, biotechnology, environmental science and more. Our program also provides a solid foundation for advanced studies in chemistry. Enroll now and start your journey towards a fulfilling career in chemistry. Read more...

Contact Information

- Program Coordinator: **Scott Bunge** | sbunge@kent.edu | 330-672-9445
- Speak with an Advisor
- Chat with an Admissions Counselor

Program Delivery

- **Delivery:**
  - In person
- **Location:**
  - Kent Campus

Examples of Possible Careers and Salaries*

Chemical technicians

- 2.8% slower than the average
- 68,100 number of jobs
- $49,820 potential earnings

Chemistry teachers, postsecondary

- 4.3% about as fast as the average
- 26,400 number of jobs
- $80,400 potential earnings

Chemists

- 4.7% about as fast as the average
- 86,700 number of jobs
- $79,300 potential earnings

Food scientists and technologists

- 4.4% about as fast as the average
- 14,200 number of jobs
- $73,450 potential earnings

Forensic science technicians

- 14.1% much faster than the average
- 17,200 number of jobs
- $60,590 potential earnings

Natural sciences managers

- 4.8% about as fast as the average
- 71,400 number of jobs
- $137,940 potential earnings

Secondary school teachers, except special and career/technical education

- 3.8% about as fast as the average
- 1,050,800 number of jobs
- $62,870 potential earnings

Accreditation

The B.S. degree in Chemistry is accredited by the American Chemical Society (ACS).

* Source of occupation titles and labor data comes from the U.S. Bureau of Labor Statistics' Occupational Outlook Handbook. Data comprises projected percent change in employment over the next 10 years; nation-wide employment numbers; and the yearly median wage at which half of the workers in the occupation earned more than that amount and half earned less.

Admission Requirements

The university affirmatively strives to provide educational opportunities and access to students with varied backgrounds, those with special talents and adult students who graduated from high school three or more years ago.

First-Year Students on the Kent Campus: First-year admission policy on the Kent Campus is selective. Admission decisions are based upon cumulative grade point average, strength of high school college preparatory curriculum and grade trends. Students not admissible to the Kent Campus may be administratively referred to one of the seven regional campuses to begin their college coursework. For more information, visit the admissions website for first-year students.

First-Year Students on the Regional Campuses: First-year admission to Kent State's campuses at Ashtabula, East Liverpool, Geauga, Salem, Stark, Trumbull and Tuscarawas, as well as the Twinsburg Academic Center, is open to anyone with a high school diploma or its equivalent. For more information on admissions, contact the Regional Campuses admissions offices.

International Students: All international students must provide proof of English language proficiency unless they meet specific exceptions. For more information, visit the admissions website for international students.

Transfer Students: Students who have attended any other educational institution after graduating from high school must apply as undergraduate transfer students. For more information, visit the admissions website for transfer students.

Former Students: Former Kent State students or graduates who have not attended another college or university since Kent State may complete the reenrollment or reinstatement form on the University Registrar's website.

Admission policies for undergraduate students may be found in the University Catalog.

Some programs may require that students meet certain requirements before progressing through the program. For programs with progression requirements, the information is shown on the Coursework tab.

Program Requirements

Major Requirements

Code	Title	Credit Hours
Major Requirements (courses count in major GPA)		
CHEM 10060	GENERAL CHEMISTRY I (KBS)	4-6
or CHEM 10970	HONORS GENERAL CHEMISTRY I (KBS)	
or CHEM 11060	GENERAL CHEMISTRY I BOOST (KBS)	
CHEM 10061	GENERAL CHEMISTRY II (KBS)	4
or CHEM 10971	HONORS GENERAL CHEMISTRY II (KBS)	
CHEM 10062	GENERAL CHEMISTRY I LABORATORY (KBS) (KLAB)	1
CHEM 10063	GENERAL CHEMISTRY II LABORATORY (KBS) (KLAB)	1
CHEM 30105	ANALYTICAL CHEMISTRY I	3
CHEM 30301	INORGANIC CHEMISTRY I	3
CHEM 30475	ORGANIC CHEMISTRY LABORATORY I (ELR)	1
CHEM 30476	ORGANIC CHEMISTRY LABORATORY II	1
CHEM 30481	ORGANIC CHEMISTRY I	3
CHEM 30482	ORGANIC CHEMISTRY II	3
Additional Requirements (courses do not count in major GPA)		
UC 10001	FLASHES 101	1
Foreign Language (see Foreign Language College Requirement below)		8
Kent Core Composition		6
Kent Core Humanities and Fine Arts (minimum one course from each)		9
General Electives (total credit hours depends on earning 120 credits hour, including 39 upper-division credit hours)		5
Concentrations		
Choose from the following:		67
Chemistry		
Industrial Chemistry		
Materials Chemistry		
Minimum Total Credit Hours:		**120**

Chemistry Concentration Requirements

Code	Title	Credit Hours
Concentration Requirements (courses count in major GPA)		
CHEM 30106	ANALYTICAL CHEMISTRY II	2
CHEM 30107	ANALYTICAL CHEMISTRY LABORATORY I (WIC) [1]	1
CHEM 30108	ANALYTICAL CHEMISTRY LABORATORY II (WIC) [1]	2
CHEM 30284	INTRODUCTORY BIOLOGICAL CHEMISTRY	4
CHEM 40302	INORGANIC CHEMISTRY II	2
CHEM 40303	INORGANIC CHEMISTRY III	2
CHEM 40364	INTERMEDIATE INORGANIC CHEMISTRY LAB	1
CHEM 40477	INTERMEDIATE ORGANIC CHEMISTRY LABORATORY	1
CHEM 40483	INTERMEDIATE ORGANIC CHEMISTRY	1
CHEM 40555	PHYSICAL CHEMISTRY I	3
CHEM 40556	PHYSICAL CHEMISTRY II	3
CHEM 40557	PHYSICAL CHEMISTRY LABORATORY	2
CHEM 40568	ELEMENTARY PHYSICAL CHEMISTRY LABORATORY	1
MATH 12002	ANALYTIC GEOMETRY AND CALCULUS I (KMCR)	5
MATH 12003	ANALYTIC GEOMETRY AND CALCULUS II	5
MATH 22005	ANALYTIC GEOMETRY AND CALCULUS III	4
PHY 23101	GENERAL UNIVERSITY PHYSICS I (KBS) (KLAB)	5
PHY 23102	GENERAL UNIVERSITY PHYSICS II (KBS) (KLAB)	5
Advisor-Approved Chemistry (CHEM) Upper-Division Elective (40000 level)		3
Additional Requirements (courses do not count in major GPA)		
Kent Core Social Sciences (must be from two disciplines)		6
General Electives		9
Minimum Total Credit Hours:		**67**

[1] A minimum C grade must be earned to fulfill the writing-intensive requirement.

Industrial Chemistry Concentration Requirements

Code	Title	Credit Hours
Concentration Requirements (courses count in major GPA)		
CHEM 30051	CAREER PATHWAYS IN CHEMISTRY	1
CHEM 30106	ANALYTICAL CHEMISTRY II	2
CHEM 30107	ANALYTICAL CHEMISTRY LABORATORY I (WIC) [1]	1
CHEM 30108	ANALYTICAL CHEMISTRY LABORATORY II (WIC) [1]	2
CHEM 40302	INORGANIC CHEMISTRY II	2
CHEM 40364	INTERMEDIATE INORGANIC CHEMISTRY LAB	1
CHEM 40567	PHYSICAL CHEMISTRY FOR LIFE SCIENCES [2]	4
CHEM 40568	ELEMENTARY PHYSICAL CHEMISTRY LABORATORY	1
ECON 22060	PRINCIPLES OF MICROECONOMICS (KSS)	3
MATH 12002	ANALYTIC GEOMETRY AND CALCULUS I (KMCR)	5
MATH 12003	ANALYTIC GEOMETRY AND CALCULUS II	5
MATH 12022	PROBABILITY AND STATISTICS FOR LIFE SCIENCES	3-4
or MATH 22005	ANALYTIC GEOMETRY AND CALCULUS III	
PHY 22564	INTRODUCTION TO MATERIALS PHYSICS	3
PHY 23101	GENERAL UNIVERSITY PHYSICS I (KBS) (KLAB)	5
PHY 23102	GENERAL UNIVERSITY PHYSICS II (KBS) (KLAB)	5
Chemistry Elective, choose from the following:		3
CHEM 40352	INORGANIC MATERIALS CHEMISTRY	
CHEM 40451	ORGANIC MATERIALS CHEMISTRY	
CHEM 40559	NANOMATERIALS	
CHEM 40571	SURFACE CHEMISTRY	
Concentration Electives, choose from the following:		12
ACCT 23020	INTRODUCTION TO FINANCIAL ACCOUNTING	
BA 44152	PROJECT MANAGEMENT	
CHEM 30284	INTRODUCTORY BIOLOGICAL CHEMISTRY	
CHEM 40092	INTERNSHIP IN CHEMISTRY AND BIOCHEMISTRY (ELR) [3]	

or CHEM 40796	INDIVIDUAL INVESTIGATION	
CHEM 40113	CHEMICAL SEPARATIONS	
CHEM 40352	INORGANIC MATERIALS CHEMISTRY	
CHEM 40451	ORGANIC MATERIALS CHEMISTRY	
CHEM 40557	PHYSICAL CHEMISTRY LABORATORY	
CHEM 40559	NANOMATERIALS	
CHEM 40571	SURFACE CHEMISTRY	
ENGR 43080	INDUSTRIAL AND ENVIRONMENTAL SAFETY	
PLST 48401	PATENT LAW	
Additional Requirements (courses do not count in major GPA)		
Kent Core Social Sciences (must be from two disciplines)		3
General Electives		6
Minimum Total Credit Hours:		**67**

1 A minimum C grade must be earned to fulfill the writing-intensive requirement.

2 Taking both CHEM 40555 and CHEM 40556 may be substituted in place of CHEM 40567 and 2 credit hours of concentration electives.

3 CHEM 40092 is strongly encouraged.

Materials Chemistry Concentration Requirements

Code	Title	Credit Hours
Concentration Requirements (courses count in major GPA)		
CHEM 30050	INTRODUCTION TO MATERIALS CHEMISTRY	2
CHEM 30106	ANALYTICAL CHEMISTRY II	2
CHEM 30284	INTRODUCTORY BIOLOGICAL CHEMISTRY	4
CHEM 40053	MATERIALS CHEMISTRY LABORATORY	2
CHEM 40302	INORGANIC CHEMISTRY II	2
CHEM 40303	INORGANIC CHEMISTRY III	2
CHEM 40352	INORGANIC MATERIALS CHEMISTRY	3
CHEM 40364	INTERMEDIATE INORGANIC CHEMISTRY LAB	1
CHEM 40451	ORGANIC MATERIALS CHEMISTRY	3
CHEM 40555	PHYSICAL CHEMISTRY I	3
CHEM 40556	PHYSICAL CHEMISTRY II	3
CHEM 40557	PHYSICAL CHEMISTRY LABORATORY	2
MATH 12002	ANALYTIC GEOMETRY AND CALCULUS I (KMCR)	5
MATH 12003	ANALYTIC GEOMETRY AND CALCULUS II	5
MATH 22005	ANALYTIC GEOMETRY AND CALCULUS III	4
PHY 23101	GENERAL UNIVERSITY PHYSICS I (KBS) (KLAB)	5
PHY 23102	GENERAL UNIVERSITY PHYSICS II (KBS) (KLAB)	5
Concentration Electives, choose from the following:		1-2
CHEM 30107	ANALYTICAL CHEMISTRY LABORATORY I (WIC) [1]	
CHEM 30108	ANALYTICAL CHEMISTRY LABORATORY II (WIC) [1]	
CHEM 40477	INTERMEDIATE ORGANIC CHEMISTRY LABORATORY	
CHEM 40483	INTERMEDIATE ORGANIC CHEMISTRY	
CHEM 40568	ELEMENTARY PHYSICAL CHEMISTRY LABORATORY	
CHEM 40571	SURFACE CHEMISTRY	
CHEM 40796	INDIVIDUAL INVESTIGATION	
Additional Requirements (courses do not count in major GPA)		
Kent Core Social Sciences (must be from two disciplines)		6
General Electives		7
Minimum Total Credit Hours:		**67**

1 A minimum C grade must be earned to fulfill the writing-intensive requirement.

Graduation Requirements

Minimum Major GPA	Minimum Overall GPA
2.000	2.000

Foreign Language College Requirement, B.S.

- Students pursuing the Bachelor of Science degree in the College of Arts and Sciences must complete 8 credit hours of foreign language.[1]
- The Bachelor of Science in Medical Laboratory Science is exempt from this requirement.[2]
- Minimum Elementary I and II of the same language

1 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 start 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; (2) receiving credit through one of the alternative credit programs offered by Kent State University; or (3) demonstrating language proficiency comparable to Elementary II of a foreign language. When students complete the requirement with fewer than 8 credit hours and two courses, they will complete remaining credit hours with general electives.

2 The Bachelor of Science in Medical Laboratory Science exemption exists under another college policy (Three-Plus-One Programs).

Roadmaps

Chemistry Concentration

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

	Semester One		Credits
!	CHEM 10060 or CHEM 10970 or CHEM 11060	GENERAL CHEMISTRY I (KBS) or HONORS GENERAL CHEMISTRY I (KBS) or GENERAL CHEMISTRY I BOOST (KBS)	4-6
!	CHEM 10062	GENERAL CHEMISTRY I LABORATORY (KBS) (KLAB)	1
!	MATH 12002	ANALYTIC GEOMETRY AND CALCULUS I (KMCR)	5
	UC 10001	FLASHES 101	1
	Kent Core Requirement		3
		Credit Hours	**14**
	Semester Two		
!	CHEM 10061 or CHEM 10971	GENERAL CHEMISTRY II (KBS) or HONORS GENERAL CHEMISTRY II (KBS)	4
!	CHEM 10063	GENERAL CHEMISTRY II LABORATORY (KBS) (KLAB)	1
!	MATH 12003	ANALYTIC GEOMETRY AND CALCULUS II	5
	Kent Core Requirement		3

	Kent Core Requirement		3
		Credit Hours	**16**
	Semester Three		
!	CHEM 30475	ORGANIC CHEMISTRY LABORATORY I (ELR)	1
!	CHEM 30481	ORGANIC CHEMISTRY I	3
!	MATH 22005	ANALYTIC GEOMETRY AND CALCULUS III	4
!	PHY 23101	GENERAL UNIVERSITY PHYSICS I (KBS) (KLAB)	5
	Kent Core Requirement		3
		Credit Hours	**16**
	Semester Four		
!	CHEM 30301	INORGANIC CHEMISTRY I	3
!	CHEM 30476	ORGANIC CHEMISTRY LABORATORY II	1
!	CHEM 30482	ORGANIC CHEMISTRY II	3
!	PHY 23102	GENERAL UNIVERSITY PHYSICS II (KBS) (KLAB)	5
	Kent Core Requirement		3
		Credit Hours	**15**
	Semester Five		
!	CHEM 30105	ANALYTICAL CHEMISTRY I	3
!	CHEM 30107	ANALYTICAL CHEMISTRY LABORATORY I (WIC)	1
!	CHEM 40477	INTERMEDIATE ORGANIC CHEMISTRY LABORATORY	1
!	CHEM 40483	INTERMEDIATE ORGANIC CHEMISTRY	1
!	CHEM 40555	PHYSICAL CHEMISTRY I	3
	Foreign Language		4
	Kent Core Requirement		3
		Credit Hours	**16**
	Semester Six		
!	CHEM 30106	ANALYTICAL CHEMISTRY II	2
!	CHEM 30108	ANALYTICAL CHEMISTRY LABORATORY II (WIC)	2
!	CHEM 40556	PHYSICAL CHEMISTRY II	3
!	CHEM 40568	ELEMENTARY PHYSICAL CHEMISTRY LABORATORY	1
	Foreign Language		4
	Kent Core Requirement		3
		Credit Hours	**15**
	Semester Seven		
!	CHEM 40302	INORGANIC CHEMISTRY II	2
!	CHEM 40557	PHYSICAL CHEMISTRY LABORATORY	2
	Chemistry (CHEM) Upper-Division Elective (40000 level)		3
	General Electives		6
		Credit Hours	**13**
	Semester Eight		
!	CHEM 30284	INTRODUCTORY BIOLOGICAL CHEMISTRY	4
!	CHEM 40303	INORGANIC CHEMISTRY III	2
!	CHEM 40364	INTERMEDIATE INORGANIC CHEMISTRY LAB	1
	General Electives		8
		Credit Hours	**15**
		Minimum Total Credit Hours:	**120**

Industrial Chemistry Concentration

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

	Semester One		**Credits**
!	CHEM 10060 or CHEM 10970	GENERAL CHEMISTRY I (KBS) or HONORS GENERAL CHEMISTRY I (KBS) or GENERAL CHEMISTRY I BOOST (KBS)	4-6
	or CHEM 11060		
!	CHEM 10062	GENERAL CHEMISTRY I LABORATORY (KBS) (KLAB)	1
!	MATH 12002	ANALYTIC GEOMETRY AND CALCULUS I (KMCR)	5
	UC 10001	FLASHES 101	1
	Kent Core Requirement		3
		Credit Hours	**14**
	Semester Two		
!	CHEM 10061 or CHEM 10971	GENERAL CHEMISTRY II (KBS) or HONORS GENERAL CHEMISTRY II (KBS)	4
!	CHEM 10063	GENERAL CHEMISTRY II LABORATORY (KBS) (KLAB)	1
!	MATH 12003	ANALYTIC GEOMETRY AND CALCULUS II	5
	Kent Core Requirement		3
	Kent Core Requirement		3
		Credit Hours	**16**
	Semester Three		
!	CHEM 30475	ORGANIC CHEMISTRY LABORATORY I (ELR)	1
!	CHEM 30481	ORGANIC CHEMISTRY I	3
!	MATH 12022 or MATH 22005	PROBABILITY AND STATISTICS FOR LIFE SCIENCES or ANALYTIC GEOMETRY AND CALCULUS III	3
!	PHY 23101	GENERAL UNIVERSITY PHYSICS I (KBS) (KLAB)	5
	Kent Core Requirement		3
		Credit Hours	**15**
	Semester Four		
!	CHEM 30051	CAREER PATHWAYS IN CHEMISTRY	1
!	CHEM 30301	INORGANIC CHEMISTRY I	3
!	CHEM 30476	ORGANIC CHEMISTRY LABORATORY II	1
!	CHEM 30482	ORGANIC CHEMISTRY II	3
!	PHY 23102	GENERAL UNIVERSITY PHYSICS II (KBS) (KLAB)	5
	ECON 22060	PRINCIPLES OF MICROECONOMICS (KSS)	3
		Credit Hours	**16**
	Semester Five		
!	CHEM 30105	ANALYTICAL CHEMISTRY I	3
!	CHEM 30107	ANALYTICAL CHEMISTRY LABORATORY I (WIC)	1
!	CHEM 40302	INORGANIC CHEMISTRY II	2
!	CHEM 40567	PHYSICAL CHEMISTRY FOR LIFE SCIENCES	4
	Foreign Language		4
		Credit Hours	**14**
	Semester Six		
!	CHEM 30106	ANALYTICAL CHEMISTRY II	2
!	CHEM 30108	ANALYTICAL CHEMISTRY LABORATORY II (WIC)	2
!	CHEM 40568	ELEMENTARY PHYSICAL CHEMISTRY LABORATORY	1
!	PHY 22564	INTRODUCTION TO MATERIALS PHYSICS	3
	Concentration Elective		3
	Foreign Language		4
		Credit Hours	**15**
	Semester Seven		
	Chemistry Elective		3
	Concentration Electives		6
	Kent Core Requirement		3
	Kent Core Requirement		3
		Credit Hours	**15**

	Semester Eight		
!	CHEM 40364	INTERMEDIATE INORGANIC CHEMISTRY LAB	1
	Concentration Elective		3
	General Electives		11
		Credit Hours	**15**
		Minimum Total Credit Hours:	**120**

Materials Chemistry Concentration

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

			Credits
	Semester One		
!	CHEM 10060 or CHEM 10970 or CHEM 11060	GENERAL CHEMISTRY I (KBS) or HONORS GENERAL CHEMISTRY I (KBS) or GENERAL CHEMISTRY I BOOST (KBS)	4-6
!	CHEM 10062	GENERAL CHEMISTRY I LABORATORY (KBS) (KLAB)	1
!	MATH 12002	ANALYTIC GEOMETRY AND CALCULUS I (KMCR)	5
	UC 10001	FLASHES 101	1
	Kent Core Requirement		3
		Credit Hours	**14**
	Semester Two		
!	CHEM 10061 or CHEM 10971	GENERAL CHEMISTRY II (KBS) or HONORS GENERAL CHEMISTRY II (KBS)	4
!	CHEM 10063	GENERAL CHEMISTRY II LABORATORY (KBS) (KLAB)	1
!	MATH 12003	ANALYTIC GEOMETRY AND CALCULUS II	5
	Kent Core Requirement		3
	Kent Core Requirement		3
		Credit Hours	**16**
	Semester Three		
!	CHEM 30475	ORGANIC CHEMISTRY LABORATORY I (ELR)	1
!	CHEM 30481	ORGANIC CHEMISTRY I	3
!	MATH 22005	ANALYTIC GEOMETRY AND CALCULUS III	4
!	PHY 23101	GENERAL UNIVERSITY PHYSICS I (KBS) (KLAB)	5
	Kent Core Requirement		3
		Credit Hours	**16**
	Semester Four		
!	CHEM 30050	INTRODUCTION TO MATERIALS CHEMISTRY	2
!	CHEM 30301	INORGANIC CHEMISTRY I	3
!	CHEM 30476	ORGANIC CHEMISTRY LABORATORY II	1
!	CHEM 30482	ORGANIC CHEMISTRY II	3
!	PHY 23102	GENERAL UNIVERSITY PHYSICS II (KBS) (KLAB)	5
	Kent Core Requirement		3
		Credit Hours	**17**
	Semester Five		
!	CHEM 30105	ANALYTICAL CHEMISTRY I	3
!	CHEM 40302	INORGANIC CHEMISTRY II	2
!	CHEM 40451	ORGANIC MATERIALS CHEMISTRY	3
!	CHEM 40555	PHYSICAL CHEMISTRY I	3
	Foreign Language		4
		Credit Hours	**15**
	Semester Six		
!	CHEM 40303	INORGANIC CHEMISTRY III	2
!	CHEM 40352	INORGANIC MATERIALS CHEMISTRY	3
!	CHEM 40364	INTERMEDIATE INORGANIC CHEMISTRY LAB	1
!	CHEM 40556	PHYSICAL CHEMISTRY II	3
	Foreign Language		4
	Kent Core Requirement		3
		Credit Hours	**16**
	Semester Seven		
!	CHEM 40557	PHYSICAL CHEMISTRY LABORATORY	2
	Kent Core Requirement		3
	Chemistry Electives		1-2
	General Electives		7
		Credit Hours	**13**
	Semester Eight		
!	CHEM 30106	ANALYTICAL CHEMISTRY II	2
!	CHEM 30284	INTRODUCTORY BIOLOGICAL CHEMISTRY	4
!	CHEM 40053	MATERIALS CHEMISTRY LABORATORY	2
	General Electives		5
		Credit Hours	**13**
		Minimum Total Credit Hours:	**120**

University Requirements

All students in a bachelor's degree program at Kent State University must complete the following university requirements for graduation.

NOTE: University requirements may be fulfilled in this program by specific course requirements. Please see Program Requirements for details.

Flashes 101 (UC 10001)	1 credit hour
Course is not required for students with 30+ transfer credits (excluding College Credit Plus) or age 21+ at time of admission.	
Diversity Domestic/Global (DIVD/DIVG)	2 courses
Students must successfully complete one domestic and one global course, of which one must be from the Kent Core.	
Experiential Learning Requirement (ELR)	varies
Students must successfully complete one course or approved experience.	
Kent Core (see table below)	36-37 credit hours
Writing-Intensive Course (WIC)	1 course
Students must earn a minimum C grade in the course.	
Upper-Division Requirement	39 credit hours
Students must successfully complete 39 upper-division (numbered 30000 to 49999) credit hours to graduate.	
Total Credit Hour Requirement	120 credit hours

Kent Core Requirements

Kent Core Composition (KCMP)	6
Kent Core Mathematics and Critical Reasoning (KMCR)	3
Kent Core Humanities and Fine Arts (KHUM/KFA) (min one course each)	9
Kent Core Social Sciences (KSS) (must be from two disciplines)	6
Kent Core Basic Sciences (KBS/KLAB) (must include one laboratory)	6-7
Kent Core Additional (KADL)	6
Total Credit Hours:	**36-37**

Program Learning Outcomes

Graduates of this program will be able to:

1. Apply chemical knowledge to their profession.
2. Develop their abilities to plan and execute chemical experiments.
3. Prepare and deliver written and oral scientific reports.

Full Description

The Bachelor of Science degree in Chemistry is designed to provide a thorough foundation in the various fields of chemistry and the related sciences. The program is for students planning careers in the chemical industries or governmental laboratories, or who intend to do graduate work in chemistry. Students in the program have the opportunity to participate in an exchange program with the University of Leicester in England.

Chemistry students in specific concentrations may apply early to the M.S. degree in Chemistry and double count 9 credit hours of graduate courses toward both degree programs. See the Combined Bachelor's/Master's Degree Program policy in the University Catalog for more information.

The Chemistry major comprises the following concentrations:

- The **Chemistry** concentration is designed for students interested in careers as practicing chemists in industrial research and development, in government research laboratories or in academia. It includes a strong foundation in both chemistry and related disciplines (physics and mathematics) and provides opportunities to pursue advanced chemistry electives. This concentration meets the requirements for certification by the American Chemical Society and is ideal for students who plan to pursue graduate studies in chemistry.
- The **Industrial Chemistry** concentration provides solid background training in the major areas of chemistry, as well as practical training and related experiences in fields sought by local and regional chemical industries.
- The **Materials Chemistry** concentration is recommended for students interested in pursuing graduate study or industrial careers in materials science, including nanotechnology. Its requirements, similar to those of the traditional chemistry concentration, provide an opportunity for more in-depth study in the synthesis and characterization of inorganic and organic materials, including polymers.