

Chemistry, B.S.

The major in Chemistry is elected by students planning careers in the chemical sciences and frequently also by those whose interests lie in other disciplines such as biology, medicine, public health, earth sciences, ecology, secondary education, business, and law. New freshman and transfer Chemistry students are strongly encouraged to take an orientation seminar, CHEM 11, where they learn about the Chemistry major requirements, the Chemistry Department, and the career options available to students after graduation.

The curriculum of the Department is designed to satisfy the diverse needs of these students and others who may have occasion to study chemistry. The year-long lecture course sequence of CHEM M2A-CHEM M2B-CHEM M2C and laboratory course sequence of CHEM M2LA-CHEM M2LB-CHEM M3LC (or the Honors sequence of CHEM H2A-CHEM H2B-CHEM H2C and CHEM H2LA-CHEM H2LB-CHEM M3LC) cover the fundamentals of general and analytical chemistry, and serve as prerequisites to all study in the Department at more advanced levels. The subject matter of these courses also serve as a thorough introduction to the varied aspects of modern chemistry for students who do not wish to pursue their studies beyond the introductory level.

Completion of a one-year sequence in organic chemistry lectures, CHEM 51A-CHEM 51B-CHEM 51C, along with organic chemistry laboratory courses, is required for Chemistry majors and for students of the life sciences. These core organic chemistry courses are typically taken by students in their second year at UCI. All Chemistry students then take inorganic chemistry lecture and laboratory courses, CHEM 107 and CHEM 107L, an advanced instrumental analysis course, CHEM 152, and a three-quarter sequence of physical chemistry, CHEM 132A – CHEM 132B – CHEM 132C. Students will also take a mathematical and computing skill course, CHEM 5, in parallel with CHEM 132A, to help them improve their learning experience in the physical chemistry sequence.

To complete the Chemistry major requirements, the students take a minimum of five upper-division elective courses chosen from a broad menu, which includes graduate level courses. Certain advanced courses required of Chemistry majors may also be of interest to other majors. Many students elect to take a pre-defined set of elective courses in order to fulfill requirements for one of the concentrations and specializations, such as Chemical Biology, Chemistry Education, Environmental Chemistry, Medicinal Chemistry, Nuclear and Radiochemistry, Synthetic Chemistry, or Theoretical and Computational Chemistry and Quantum Science. For example, Chemistry majors who are interested in teaching chemistry at the secondary level often complete the optional concentration in Chemistry Education.

The undergraduate program of the Chemistry Department emphasizes close contact with research, and all Chemistry majors are encouraged to engage in research or independent study under the direction of a faculty member. Research is an integral requirement of the ACS certified degree, and it greatly increases chances for admission into graduate and professional schools. Students have an opportunity to write their research thesis as part of an upper-division writing course CHEM 180W (CHEM H181W in the Honors sequences). Information describing the procedures for arranging an undergraduate research opportunity is available on the Chemistry Department website (<http://www.chem.uci.edu/undergrad/>).

Chemistry majors who plan subsequent study in medical, dental, or other professional schools should request information concerning admission requirements directly from the schools which they seek to enter. Excellent counseling about preparation for a career in the health sciences is provided by the health science advisors in the School of Biological Sciences. Those intending to pursue graduate studies in chemistry should discuss their plans with a research area advisor no later than the fall quarter of their senior year. The current advisors for each research area are listed on the Chemistry Department website (<http://www.chem.uci.edu/undergrad/>).

Students may be admitted to the Chemistry major upon entering the University as freshmen, via change of major, or as transfer students from other colleges and universities. Information about change of major policies is available in the Physical Sciences Student Affairs Office and at the UCI Change of Major Criteria website (<http://www.changeofmajor.uci.edu/>). For transfer student admission, preference will be given to junior-level applicants with the highest grades overall and who have satisfactorily completed the following required courses: one year of general chemistry with laboratory and one year of approved calculus. Completion of one year of organic chemistry is strongly recommended.

All students must meet the University Requirements (<http://catalogue.uci.edu/informationforadmittedstudents/requirementsforabachelorsdegree/>).

School Requirements: None.

Departmental Requirements ¹

Basic Requirements	
MATH 2A- 2B- 2D	Single-Variable Calculus I and Single-Variable Calculus II and Multivariable Calculus I
PHYSICS 7C- 7D- 7E	Classical Physics and Classical Physics and Classical Physics
PHYSICS 7LC- 7LD	Classical Physics Laboratory and Classical Physics Laboratory
Select one of the following sequences and accompanying labs:	

CHEM M2A- M2B- M2C	Majors General Chemistry Lecture and Majors General Chemistry Lecture and Majors General Chemistry Lecture
CHEM M2LA- M2LB	Majors General Chemistry Laboratory and Majors General Chemistry Laboratory
or	
CHEM H2A- H2B- H2C	Honors General Chemistry and Honors General Chemistry and Honors General Chemistry
CHEM H2LA- H2LB	Honors General Chemistry Laboratory and Honors General Chemistry Laboratory
Complete the analytical chemistry laboratory	
CHEM M3LC	Majors Quantitative Analytical Chemistry Laboratory
Select one of the following organic chemistry sequences and accompanying labs:	
CHEM 51A- 51B- 51C	Organic Chemistry and Organic Chemistry and Organic Chemistry
CHEM M52LA- M52LB- M52LC	Majors Organic Chemistry Laboratory and Majors Organic Chemistry Laboratory and Majors Organic Chemistry Laboratory
or	
CHEM H52LA- H52LB- H52LC	Honors Organic Chemistry Laboratory and Honors Organic Chemistry Laboratory and Honors Organic Chemistry Laboratory
Complete:	
CHEM 5	Scientific Mathematical and Computing Skills
CHEM 107- 107L	Inorganic Chemistry and Inorganic Chemistry Laboratory
CHEM 152	Advanced Analytical Chemistry
CHEM 132A- 132B- 132C	Chemical Thermodynamics, Kinetics, and Dynamics and Quantum Principles, Spectroscopy, and Bonding and Molecular Structure and Elementary Statistical Mechanics
Elective Requirements ²	
Select at least five electives from the following lists, including at least two courses selected from the lecture list and at least two courses selected from the laboratory list:	
Lectures:	
BIO SCI 98	Biochemistry
BIO SCI 99	Molecular Biology
BIO SCI M114	Advanced Biochemistry
BIO SCI M116	Advanced Molecular Biology
BIO SCI M123	Introduction to Computational Biology (same as BME 132)
CBE 110	Reaction Kinetics and Reactor Design
CBE 130	Separation Processes
CBE 145	Chemical Process Control
CBE 161	Introduction to Biochemical Engineering
CBE 181	Polymer Science and Engineering
CBE 183	Surface and Adhesion Science
CHEM 100	Special Topics in Chemistry
CHEM 125	Advanced Organic Chemistry
CHEM 127	Inorganic Chemistry II
CHEM 128	Introduction to Chemical Biology
CHEM 133	Nuclear and Radiochemistry
CHEM 138	Introduction to Computational Organic Chemistry

CHEM 141	Environmental Chemistry
CHEM 145A	Gas-Phase Atmospheric Chemistry
CHEM 145B	Multi-Phase Atmospheric Chemistry
CHEM 150	Computational Chemistry
CHEM 177	Medicinal Chemistry
Any level 200 four-unit course numbered between 201-205, 210-269	
EARTHSS 142	Atmospheric Chemistry
EARTHSS 144	Marine Geochemistry and Biogeochemistry
EARTHSS 171	Microbial Biogeochemistry
ENGRCEE 162	Introduction to Environmental Chemistry
ENGRMAE 114	Fuel Cell Fundamentals and Technology
ENGRMAE 164	Air Pollution and Control
MSE 141	Nano-Scale Materials and Applications
MSE 164	X-ray Diffraction, Electron Microscopy, and Microanalysis
PHRMSCI 170A	Molecular Pharmacology I
PHRMSCI 170B	Molecular Pharmacology II
PHRMSCI 171	Physical Biochemistry
PHYSICS 111A- 111B	Classical Mechanics and Classical Mechanics
PHYSICS 112A- 112B	Electromagnetic Theory and Electromagnetic Theory
PUBHLTH 171	Human Exposure to Environmental Contaminants
Laboratories:	
BIO SCI M114L	Biochemistry Laboratory
BIO SCI M116L	Molecular Biology Laboratory
BIO SCI M118L	Experimental Microbiology Laboratory
CBE 140A	Chemical Engineering Laboratory I
CBE 140B	Chemical Engineering Laboratory II
CHEM 128L	Introduction to Chemical Biology Laboratory Techniques
CHEM 133L	Nuclear and Radiochemistry Laboratory
CHEM 150L	Computational Chemistry Laboratory
CHEM 153	Physical Chemistry Laboratory
CHEM 156	Advanced Laboratory in Chemistry and Synthesis of Materials
CHEM 160	Organic Synthesis Laboratory
CHEM 177L	Medicinal Chemistry Laboratory
CHEM 180	Undergraduate Research ³
CHEM 197	Professional Internship ⁴
EARTHSS 114	Earth System Science Laboratory and Field Methods

¹ Courses must be taken for a letter grade.

² At least three of the courses used to satisfy the Elective Requirement must be courses offered by the Chemistry Department, including at least one lecture course and one laboratory course.

³ CHEM 180 and CHEM H180 can be counted toward this requirement no more than once.

⁴ CHEM 197 must be taken for 4 units and can be counted toward this requirement no more than once.

Sample Program — Chemistry Majors ¹

Items in parentheses are recommended choices or alternatives.

Freshman

Fall	Winter	Spring
CHEM M2A- M2LA (CHEM H2A, CHEM H2LA)	CHEM M2B- M2LB (CHEM H2B, CHEM H2LB)	CHEM M2C (CHEM H2C)
MATH 2A	MATH 2B	MATH 2D
Lower-division Writing	Lower-division Writing	CHEM M3LC

CHEM 11

Sophomore

Fall	Winter	Spring
CHEM 51A- M52LA (CHEM H52A, CHEM H52LA)	CHEM 51B- M52LB (CHEM H52B, CHEM H52LB)	CHEM 51C- M52LC (CHEM H52C, CHEM H52LC)
CHEM 5	General Education	PHYSICS 7E
PHYSICS 7C- 7LC	PHYSICS 7D- 7LD	General Education

Fall	Winter	Spring
CHEM 132A	CHEM 132B	CHEM 132C
CHEM 107	CHEM 152	CHEM 107L
Chemistry Elective	Chemistry Elective	Elective
General Education	General Education	General Education

Fall	Winter	Spring
Elective/Research	Elective/Research	Elective/Research
Upper-division Writing	Chemistry Elective	Chemistry Elective
Chemistry Elective	General Education	General Education
General Education	General Education	

Optional American Chemical Society Certification

For ACS Certification, the program must include:	
A. The Chemical Biology lecture and lab courses:	
CHEM 128	Introduction to Chemical Biology
CHEM 128L	Introduction to Chemical Biology Laboratory Techniques
B. One course selected from the following:	
CHEM 153	Physical Chemistry Laboratory
CHEM 156	Advanced Laboratory in Chemistry and Synthesis of Materials
CHEM 160	Organic Synthesis Laboratory
CHEM 180	Undergraduate Research
CHEM H180A	Honors Research in Chemistry
CHEM H180B	Honors Research in Chemistry
CHEM H180C	Honors Research in Chemistry
C. One course or the lecture/lab pair selected from:	
CHEM 125	Advanced Organic Chemistry
CHEM 127	Inorganic Chemistry II
CHEM 133	Nuclear and Radiochemistry
CHEM 133L	Nuclear and Radiochemistry Laboratory
CHEM 138	Introduction to Computational Organic Chemistry
CHEM 141	Environmental Chemistry
CHEM 150	Computational Chemistry
CHEM 150L	Computational Chemistry Laboratory
CHEM 177	Medicinal Chemistry
CHEM 177L	Medicinal Chemistry Laboratory
or	
CHEM 201-205, 213-249	
D. One course or the lecture/lab pair selected from list B or C.	
E. Independent research with a written thesis submitted as part of CHEM 180W or CHEM H181W.	

Optional Concentrations and Specializations in Chemistry

The core chemistry curriculum provides the students with the foundational knowledge of the traditional areas of chemistry. In addition, the students have an option to focus their education on one of the following areas of chemistry by completing the chemistry core requirements and strategically choosing their elective requirements as shown below. At least two quarters of undergraduate research (CHEM 180, CHEM H180A, CHEM H180B, CHEM H180C) with a research group chosen in consultation with the faculty advisors are strongly recommended but not required for all the concentrations and specializations listed below. The names of the faculty advisors for each concentration and specialization can be found on the Department of Chemistry website.

Only one specialization or concentration may appear on the transcript. If students simultaneously satisfy requirements for more than one specialization or concentration, they should choose which one will be appearing on their transcript.

Optional Concentration in Chemical Biology

BIO SCI 97	Genetics
BIO SCI 98	Biochemistry
BIO SCI 99	Molecular Biology
CHEM 128	Introduction to Chemical Biology
CHEM 128L	Introduction to Chemical Biology Laboratory Techniques

Optional Specialization in Environmental Chemistry

CHEM 145A	Gas-Phase Atmospheric Chemistry
or EARTHSS 142	Atmospheric Chemistry
EARTHSS 144	Marine Geochemistry and Biogeochemistry
CHEM 141	Environmental Chemistry
CHEM 153	Physical Chemistry Laboratory

Optional Specialization in Medicinal Chemistry

CHEM 128	Introduction to Chemical Biology
CHEM 128L	Introduction to Chemical Biology Laboratory Techniques
CHEM 160	Organic Synthesis Laboratory
CHEM 177	Medicinal Chemistry
CHEM 177L	Medicinal Chemistry Laboratory

Optional Specialization in Nuclear and Radiochemistry

CHEM 133	Nuclear and Radiochemistry
CHEM 133L	Nuclear and Radiochemistry Laboratory
CHEM 153	Physical Chemistry Laboratory
and an approved elective	

Optional Specialization in Synthetic Chemistry

CHEM 125	Advanced Organic Chemistry
CHEM 127	Inorganic Chemistry II
CHEM 156	Advanced Laboratory in Chemistry and Synthesis of Materials
CHEM 160	Organic Synthesis Laboratory

Optional Concentration in Chemistry Education

CHEM 193	Research Methods
EDUC 55	Knowing and Learning in Mathematics and Science
PHY SCI 5	California Teach 1: Introduction to Science and Mathematics Teaching
PHY SCI 105	California Teach 2: Middle School Science and Mathematics Teaching

Optional Concentration in Theoretical and Computational Chemistry and Quantum Science

The concentration in Theoretical and Computational Chemistry and Quantum Science aims to provide a rigorous education for Chemistry majors with special interests in theory and computation and quantum science. Compared to the regular Chemistry major, additional courses in mathematics, physics, and computer science are required, while upper-division laboratory courses are option. Enrolling in this concentration requires approval by a faculty advisor. The advisors will be members of the Theoretical and Computational Chemistry faculty group, and will assist the students in choosing elective courses tailored to the students' interests.

A. Complete the following:	
MATH 3A	Introduction to Linear Algebra
MATH 3D	Elementary Differential Equations
PHYSICS 50	Introductory Mathematical Physics
CHEM 150	Computational Chemistry

CHEM 150L	Computational Chemistry Laboratory
Select at least nine courses from the following or the Chemistry major electives:	
B. Select at least one from the following:	
PHYSICS 111A	Classical Mechanics
PHYSICS 112A	Electromagnetic Theory
PHYSICS 111B	Classical Mechanics
PHYSICS 112B	Electromagnetic Theory
PHYSICS 113A	Quantum Mechanics
PHYSICS 113B	Quantum Mechanics
PHYSICS 113C	Quantum Mechanics
PHYSICS 115A	Statistical Physics
PHYSICS 125A	Mathematical Physics
PHYSICS 125B	Mathematical Physics
C. Select at least one from the following:	
MATH 105A- 105LA	Numerical Analysis I and Numerical Analysis Laboratory
MATH 105B- 105LB	Numerical Analysis II and Numerical Analysis Laboratory
STATS 7	Basic Statistics
STATS 110	Statistical Methods for Data Analysis I
STATS 111	Statistical Methods for Data Analysis II
STATS 112	Statistical Methods for Data Analysis III
D. Select at least one of the following:	
EECS 12	Introduction to Programming
EECS 20	Computer Systems and C Programming
EECS 22	Advanced C Programming
EECS 22L	Software Engineering Project in C Language
Optional Courses - The following courses are required for the regular Chemistry major, but optional for the Concentration in Theoretical and Computational Chemistry:	
CHEM 5	Scientific Mathematical and Computing Skills
CHEM 107L	Inorganic Chemistry Laboratory
CHEM 152	Advanced Analytical Chemistry
All electives listed under the Chemistry major.	

Sample Program - Concentration in Theoretical and Computational Chemistry

Items in parentheses are recommended choices or alternatives.

Freshman

Fall	Winter	Spring
CHEM M2A- M2LA (CHEM H2A, CHEM H2LA)	CHEM M2B- M2LB (CHEM H2B, CHEM H2LB)	CHEM M3C- M3LC (CHEM H2C, CHEM H2LC)
MATH 2A	MATH 2B	MATH 2D
Lower-Division Writing	Lower-Division Writing	General Education

Sophomore

Fall	Winter	Spring
CHEM 51A- M52LA (CHEM H52A, CHEM H52LA)	CHEM 51B- M52LB (CHEM H52B, CHEM H52LB)	CHEM 51C- M52LC (CHEM H52C, CHEM H52LC)
PHYSICS 7C- 7LC	PHYSICS 7D- 7LD	PHYSICS 7E
MATH 3A	MATH 3D	

Junior

Fall	Winter	Spring
CHEM 132A	CHEM 132B	CHEM 132C
CHEM 107	PHYSICS 112A	PHYSICS 113A
PHYSICS 111A	General Education	EECS 20
EECS 12	General Education	General Education
PHYSICS 50		

Senior		
Fall	Winter	Spring
CHEM 150	CHEM 150L	Elective/Research
MATH 105A- 105LA	EECS 22L (MATH 105B - MATH 105LB)	General Education
EECS 22 (STATS 7)	General Education	General Education
Upper-Division Writing	General Education	General Education

Sample program for transfer students entering at the Junior level

Junior		
Fall	Winter	Spring
CHEM 132A	CHEM 132B	CHEM 132C
CHEM 107	STATS 7	PHYSICS 50
MATH 105A- 105LA	General Education	EECS 20
EECS 12	General Education	General Education

Senior		
Fall	Winter	Spring
CHEM 150	CHEM 150L	PHYSICS 113A
PHYSICS 111A	PHYSICS 112A	EECS 22L
General Education	General Education	General Education
Upper-Division Writing	General Education	General Education

Secondary Teaching Certification Option

With *additional* course work and field experience offered through the UCI Cal Teach program, students who complete the concentration in Chemistry Education can also earn a California Preliminary Single Subject Teaching Credential. Completing the bachelor's degree, concentration, and teacher certification in four years is possible with careful, early planning. Additional courses required for teacher certification are:

EDUC 109	Reading and Writing in Mathematics and Science
EDUC 143AW- 143BW	Classroom Interactions I and Classroom Interactions II
EDUC 148	Complex Pedagogical Design
EDUC 158	Student Teaching Mathematics and Science in Middle/High School (two quarters)
LPS 60	The Making of Modern Science

Successful completion of EDUC 143AW-EDUC 143BW and EDUC 148 will be accepted in lieu of three electives (from the above Elective Requirements list) for students pursuing the concentration in Chemistry Education. To complete the remaining electives, students may choose any combination from the approved list of lectures or laboratories, e.g. two laboratories, or two lectures, or one laboratory and one lecture. For additional information about teacher certification requirements and enrollment procedures, see Preparation for Teaching Science and Mathematics (<http://catalogue.uci.edu/schoolofphysicalsciences/#undergraduateprogramstext>). Interested students are strongly encouraged to contact the Cal Teach Resource and Advising Center or the Physical Sciences Student Affairs Office.

Sample Program — Concentration in Chemistry Education (with Secondary Teaching Certification option)

Items in parentheses are recommended choices or alternatives.

Freshman		
Fall	Winter	Spring
CHEM M2A- M2LA (CHEM H2A, CHEM H2LA)	CHEM M2B- M2LB (CHEM H2B, CHEM H2LB)	CHEM M3C- M3LC (CHEM H2C, CHEM H2LC)
MATH 2A	MATH 2B	MATH 2D
PHY SCI 5	General Education	General Education
Sophomore		
Fall	Winter	Spring
CHEM 51A- M52LA (CHEM H52C, CHEM H52LA)	CHEM 51B- M52LB (CHEM H52B, CHEM H52LB)	CHEM 51C- M52LC (CHEM H52C, CHEM H52LC)
CHEM 5	PHYSICS 7C- 7LC	PHYSICS 7D- 7LD
PHY SCI 105 (PHYSICS 2)	CHEM 193	LPS 60 General Education
Junior		
Fall	Winter	Spring
CHEM 132A	CHEM 132B	CHEM 132C
CHEM 107	CHEM 152	CHEM 107L
EDUC 55	EDUC 143AW	EDUC 148
PHYSICS 7E		Chemistry Elective

Senior		
Fall	Winter	Spring
Chemistry Elective	General Education	General Education
EDUC 143BW	EDUC 109	EDUC 158
General Education	EDUC 158	

The departmental requirements leave the student a great deal of latitude in choice of courses; the student can choose to pursue interests ranging from biochemistry on the one hand to chemical physics on the other. Many of the basic requirements above coincide with those of the School of Biological Sciences. For this reason a double major in Chemistry and Biological Sciences is popular. The Department is approved by the American Chemical Society to offer an undergraduate degree certified by the Society as suitable background for a career in chemistry or for graduate study in chemistry. While it is not mandatory, it is desirable for students to pursue a course of study that the Department judges to merit a certified degree. Specifically, the following courses must be included in the program of study and must be taken for a letter grade:

CHEM 128	Introduction to Chemical Biology
or BIO SCI 98	Biochemistry
and two laboratory courses from the list of upper-division laboratory courses that are not already required for the major from the following:	
CHEM 128L	Introduction to Chemical Biology Laboratory Techniques
CHEM 152	Advanced Analytical Chemistry
CHEM 153	Physical Chemistry Laboratory
CHEM 156	Advanced Laboratory in Chemistry and Synthesis of Materials
CHEM 160	Organic Synthesis Laboratory
CHEM 180	Undergraduate Research (or CHEM H180)

Sample Program — Chemistry-Biological Sciences Double Majors

Items in parentheses are recommended choices or alternatives.

Freshman		
Fall	Winter	Spring
CHEM M2A- M2LA (CHEM H2A, CHEM H2LA)	CHEM M2B- M2LB (CHEM H2B, CHEM H2LB)	CHEM M2C- M3LC (CHEM H2C, CHEM M3LC)
MATH 2A	MATH 2B	MATH 2D
BIO SCI 93	BIO SCI 94	General Education
CHEM 11	General Education	
BIO SCI 2A		
Sophomore		
Fall	Winter	Spring
CHEM 51A- M52LA (CHEM H52A, CHEM H52LA)	CHEM 51B- M52LB (CHEM H52B, CHEM H52LB)	CHEM 51C- M52LC (CHEM H52C, CHEM H52LC)
CHEM 5	PHYSICS 7C- 7LC	PHYSICS 7D- 7LD
(Physics 2)	BIO SCI 98	BIO SCI 99
BIO SCI 97	General Education/Elective	BIO SCI 194S
Junior		
Fall	Winter	Spring
CHEM 132A	CHEM 132B	CHEM 132C
PHYSICS 7E	CHEM 107L	Bio. Sci. major course
CHEM 107	General Education/Elective	
BIO SCI 100		
Senior		
Fall	Winter	Spring
Bio. Sci. major course	Chemistry Elective	Chemistry Elective
Bio. Sci. Lab	Bio. Sci. Elective	Chemistry Elective
General Education/Elective	Bio. Sci. Lab	Bio. Sci. Lab
	General Education/Elective	General Education/Elective

The Honors Program in Chemistry is a research-based program offered to selected Chemistry majors during their final year. Applicants to the program must have completed their junior year with a grade point average of at least 3.3 overall and in their Chemistry courses. They must also have demonstrated the potential of carrying out research of honors quality, as judged by the Chemistry faculty member who will supervise their research. Students in this program enroll in Honors Research in Chemistry (CHEM H180A-CHEM H180B-CHEM H180C) throughout their senior year and submit a formal thesis late in the spring quarter. They also enroll in the Honors Seminar in Chemistry (CHEM H181W), in which they receive instruction in scientific writing and present a formal research seminar. Successful completion of CHEM H181W satisfies the UCI upper-division writing requirement. NOTE: Students enrolled in the Honors Research in Chemistry (CHEM H180A-CHEM H180B-CHEM H180C) do not enroll in CHEM 180 (Undergraduate Research).

Students who complete these requirements, whose grade point average remains above the 3.3 standard, and whose research is judged to be of honors quality will graduate with Departmental Honors in Chemistry.

The Department also offers an Honors General Chemistry sequence, CHEM H2A-CHEM H2B-CHEM H2C. This course in general chemistry is designed for members of the Campuswide Honors Collegium (CHC) and other highly qualified students. It covers the same material as CHEM 1A-CHEM 1B-CHEM M3C, but in greater depth.

Additional information is available from the Chemistry Undergraduate Program Office.

- Chemistry, Ph.D.