

CHEMISTRY B.S.

(American Chemical Society Certified)

The courses required for the B.S. degree provide a solid education in chemistry for the professional chemist and in preparation for graduate work in most areas of chemistry. These requirements meet the latest certification standards of the American Chemical Society.

Bachelor of Science - Chemistry

College of Humanities & Sciences

Degree Specific Credits: 87-89

Required Cumulative GPA: 2.0

Catalog Year: 2018-2019

General Education Requirements

Information regarding these requirements can be found in the General Education Section (<http://catalog.umd.edu/academics/general-education-requirements>) of the catalog.

Summary

Code	Title	Hours
Lower-Division Core Courses		45
	General Chemistry	
	Organic Chemistry	
	Physics	
	Mathematics	
	Computer Science	
Upper-Division Core Courses		30
	Analytical Chemistry	
	Physical Chemistry	
	Inorganic Chemistry	
	Biochemistry	
	Mathematics	
Advanced Electives		3
Modern & Classical Language OR Additional Advanced Electives		6-8
Ethics		3
Total Hours		87-89

Lower-Division Core Courses

General Chemistry

Code	Title	Hours
Complete all of the following courses:		
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	5
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	5
Total Hours		10

Minimum Required Grade: C-

Organic Chemistry

Code	Title	Hours
Complete all of the following courses:		
CHMY 221 & CHMY 222	Organic Chemistry I and Organic Chemistry I Lab	5
CHMY 223 & CHMY 224	Organic Chemistry II and Organic Chemistry II Lab	5
Total Hours		10

Minimum Required Grade: C-

Physics

Code	Title	Hours
Complete all of the following courses:		
PHSX 215N & PHSX 216N	Fund of Physics w/Calc I and Physics Laboratory I w/Calc	5
PHSX 217N & PHSX 218N	Fund of Physics w/Calc II and Physics Laboratory II w/Calc	5
Total Hours		10

Minimum Required Grade: C-

Mathematics

Code	Title	Hours
Complete all of the following courses:		
M 171	Calculus I	4
M 172	Calculus II	4
M 273	Multivariable Calculus	4
Total Hours		12

Minimum Required Grade: C-

Computer Science

Code	Title	Hours
Complete all of the following courses:		
CSCI 125	Computation in the Sciences	3

Minimum Required Grade: C-

Upper-Division Core Courses

Analytical Chemistry

Code	Title	Hours
Complete all of the following courses:		
CHMY 311	Analytical Chem-Quant Analysis	4
CHMY 421	Advanced Instrument Analysis	4
Total Hours		8

Minimum Required Grade: C-

Physical Chemistry

Code	Title	Hours
Complete all of the following courses:		
CHMY 371	Phys Chem-Qntm Chm & Spotsrscopy	4

CHMY 373	Phys Chem-Kntcs & Thrmdynmcs	4
Total Hours		8

Minimum Required Grade: C-

Inorganic Chemistry

Code	Title	Hours
Complete all of the following courses:		
CHMY 401	Advanced Inorganic Chemistry	3
CHMY 402	Advanced Inorganic Chem Lab	2
Total Hours		5

Minimum Required Grade: C-

Biochemistry

Code	Title	Hours
Complete all of the following courses:		
BCH 480	Advanced Biochemistry I	3
BCH 486	Biochemistry Research Lab	3
Total Hours		6

Minimum Required Grade: C-

Mathematics

Code	Title	Hours
Complete the following course:		
M 311	Ordinary Differential Equations and Systems	3
Total Hours		3

Minimum Required Grade: C-

Advanced Electives

Note: Other classes in Chemistry, Physics, Geology, Biochemistry, or Mathematics may be used to meet the advanced electives requirement with approval of the chemistry advisor. A maximum of 3 credits of CHMY 492 or CHMY 499 may be applied toward degree requirements.

Code	Title	Hours
Complete 3 credits in the following courses:		3
CHMY 391	Special Topics/Expmntl Crse	
CHMY 442	Aquatic Chemistry	
CHMY 465	Organic Spectroscopy	
CHMY 491	Special Topics/Expmntl Crse	
CHMY 492	Independent Study	
CHMY 499	Senior Thesis/capstone	
Total Hours		3

Minimum Required Grade: C-

Modern & Classical Language OR Additional Advanced Electives

Rule: Complete 2 semesters of a language or 2 additional advanced elective courses of at least 3 credits each from the above list. Subject to approval of the chemistry advisor.

Note: Other classes in Chemistry, Physics, Geology, Biochemistry, or Mathematics may be used to meet the advanced electives requirement

with approval of the chemistry advisor. A maximum of 3 credits of CHMY 492 or CHMY 499 may be applied toward degree requirements.

Minimum Required Grade: C-

Ethics

Code	Title	Hours
Complete the following course:		
CHMY 305E	Ethics, Literature and Writing in the Sciences	3
Total Hours		3

Minimum Required Grade: C-