

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 Humanities & Sciences

Degree Specific Credits: 94

Required Cumulative GPA: 2.0

Catalog Year: 2017-2018

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

Lower Core Courses	45
General Chemistry	
Organic Chemistry	
Physics	
Mathematics	
Computer Science	
Upper Division Core Courses	33
Analytical Chemistry	
Physical Chemistry	
Inorganic Chemistry	
Biochemistry	
Mathematics	
Advanced Electives	3-9
Modern Foreign Language	10
Ethics	3
Total Hours	94-100

Lower Core Courses

Rule: All courses in all subcategories listed are required

45 Total Credits Required

General Chemistry

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

CHMY 221	Organic Chemistry I	3
CHMY 222	Organic Chemistry I Lab	2
CHMY 223	Organic Chemistry II	3
CHMY 224	Organic Chemistry II Lab	2
Total Hours		10

Minimum Required Grade: C-

Physics

PHSX 215N	Fund of Physics w/Calc I	4
PHSX 216N	Physics Laboratory I w/Calc	1
PHSX 217N	Fund of Physics w/Calc II	4
PHSX 218N	Physics Laboratory II w/Calc	1
Total Hours		10

Minimum Required Grade: C-

Mathematics

M 171	Calculus I	4
M 172	Calculus II	4
M 273	Multivariable Calculus	4
Total Hours		12

Minimum Required Grade: C-

Computer Science

CSCI 250	Computer Mdlng/Science Majors	3
Total Hours		3

Upper Division Core Courses

Rule: All courses in all subcategories listed are required

33 Total Credits Required

Analytical Chemistry

CHMY 311	Analytical Chem-Quant Analysis	4
CHMY 421	Advanced Instrument Analysis	4
Total Hours		8

Minimum Required Grade: C-

Physical Chemistry

CHMY 371	Phys Chem-Qntm Chm & Spctrscopy	4
CHMY 373	Phys Chem-Kntcs & Thrmdynmcs	4
Total Hours		8

Minimum Required Grade: C-

Inorganic Chemistry

CHMY 401	Advanced Inorganic Chemistry	3
CHMY 402	Advanced Inorganic Chem Lab	2
CHMY 403	Descriptive Inorganic Chem	3
Total Hours		8

Minimum Required Grade: C-

Biochemistry

BCH 480	Advanced Biochemistry I	3
BCH 486	Biochemistry Research Lab	3
Total Hours		6

Minimum Required Grade: C-

Minimum Required Grade: C-

Mathematics

M 311	Ordinary Differential Equations and Systems	3
Total Hours		3

Minimum Required Grade: C-

Advanced Electives**Rule:** Choose 3 to 9 credits from the listed courses.**Note:** 3 credits maximum of CHMY 492 or CHMY 499 may be applied toward degree requirements.

Other classes in chemistry, physics, geology, biochemistry, or mathematics may be used to meet the Advanced Electives requirement with approval of the Chemistry Adviser.

2 additional Advanced Electives of at least 3 credits each may be substituted for the Modern Language requirement with approval of the Chemistry Adviser.

Select 3-9 credits from the following:	3-9
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	3-9

Minimum Required Grade: C-

Modern Foreign Language**Rule:** Complete 2 semesters (10 credits) of a modern language or 2 additional advanced elective courses**Note:** 2 Advanced Elective courses worth at least 3 credits each may be substituted for the Modern Foreign Language requirement with approval from the Chemistry Adviser.

Minimum Required Grade: Pass

10 Total Credits Required

Ethics**Rule:** Complete the following course

CHMY 305E	Ethics, Literature and Writing in the Sciences	3
Total Hours		3