



College of Computer, Mathematical, and Natural Sciences

Chemistry BA (1905A) Effective Fall 2023

Name _____ UID _____ Date _____

NOTES

General Education Requirements (27-39 cr.)				
Fundamental Studies				
Requirement	Course	Credits	Grade	Semester
AW Academic Writing		3		
PW Professional Writing		3		
OC Oral Communication		3		
Distributive Studies				
Requirement	Course	Credits	Grade	Semester
HS History and Social Sciences		3		
HS History and Social Sciences		3		
HU Humanities		3		
HU Humanities		3		
SP Scholarship in Practice (non-major)		3		
SP Scholarship in Practice		3		
I-Series (Can overlap with Distributive Studies and/or Diversity)				
Requirement	Course	Credits	Grade	Semester
IS I-Series				
IS I-Series				
Diversity (Can overlap with Distributive Studies and/or I-Series)				
Requirement	Course	Credits	Grade	Semester
UP Understanding Plural Societies				
UP Understanding Plural Societies <i>or</i> CC Cultural Competence				

Mathematics (MA), Analytic Reasoning (AR), Natural Science with lab (NL), and Natural Science (NS)
Gen Ed categories are satisfied by major requirements.

Lower Level CHEM required for Biochem majors (18 cr.)				
Title	Course	Cr	Gr	Sem
Principles of Gen Chem	CHEM 146	3		
Intro to Lab Practices	CHEM 177**	2		
Organic Chem I	CHEM 237	4		
Organic Chem II	CHEM 247	4		
Gen Chem and Energetics	CHEM 276	2		
Bioanalytical Lab	CHEM 277**	3		

Alternate sequence for internal and external transfers (17 cr.)				
Title	Course	Cr	Gr	Sem
Fundamentals of Gen Chem	CHEM 131	3		
Gen Chem I Lab	CHEM 132	1		
Organic Chem I	CHEM 231	3		
Organic Chem I Lab	CHEM 232	1		
Organic Chem II	CHEM 241	3		
Organic Chem II Lab	CHEM 242	1		
Gen Chem and Energetics	CHEM 271	2		
Bioanalytical Lab	CHEM 277**	3		

**Effective Fall 2023 for BA major: All Chemistry BA students must take EITHER CHEM 177 or CHEM277. If neither are taken, an additional (beyond the major requirements) upper level CHEM or BCHM credit beyond the normal major requirements must be taken to make up for the missing credit

Supporting Courses (12-17 cr.)				
Requirement	Course	Cr	Gr	Sem
100-200 level STEM class from approved list	See list	3-4		
Mathematics	MATH 140 + MATH 141 or MATH 135 + MATH 136	8		
Freshman seminar**		1		

** All incoming freshman starting as Chemistry or Biochemistry majors must take a freshman seminar: UNIV100, UNIV101, GEMS100, HONR100, HLSC100, HEIP100 or HHUM105

Supporting Courses - Choose one physics sequence (7-8 cr.)				
	Course	Cr	Gr	Sem
OR	Physics I	PHYS 131	4	
	Physics II	PHYS 132	4	
	Physics 1 lecture	PHYS 161	3	
	Physics 2 lecture	PHYS 260	3	
	Physics 2 lab	PHYS 261	1	

Required Upper Level CHEM Courses (15 cr.)				
<i>Title</i>	<i>Course</i>	<i>Cr</i>	<i>Gr</i>	<i>Sem</i>
Professional Issues in CHEM/BCHM	CHEM 395 (Spring only)	1		
Inorganic Chemistry	CHEM 401 (Spring only)	3		
Biochemistry	BCHM 461 or BCHM 463	3		
Elements of Physical Chemistry I -or- Physical Chemistry 1 + 2	CHEM 480 CHEM 481 + 482 (or BCHM 485)	3 6		

Take one (1) Required Upper Level Laboratory (3-4cr.)				
<i>Title</i>	<i>Course</i>	<i>Cr</i>	<i>Gr</i>	<i>Sem</i>
Biochemical Analysis	BCHM 477	3		
Instrumental Analysis	CHEM 425	4		
Biochemistry Laboratory	BCHM 464	3		
Physical Chemistry Laboratory 1 + 2	CHEM 483+ 484	4		

Take at least 3 credits from the following list of Upper Level CHEM/BCHM Electives (3 cr.)				
<i>Title</i>	<i>Course</i>	<i>Cr</i>	<i>Gr</i>	<i>Sem</i>
Research	CHEM 399	3		
Radiochemistry	CHEM 403	3		
Atmospheric Chemistry	CHEM 433	3		
Advanced Organic Chemistry	CHEM 441	3		
Structure Determination Using Spectroscopic Methods	CHEM 460	3		
Environmental Chemistry	CHEM 474	3		
Biochemistry II	BCHM 462	3		
Biochemistry III	BCHM 465	3		

Take at least 3 credits from the following Lower Level STEM courses (3 cr.)				
<i>Title</i>	<i>Course</i>	<i>Cr</i>	<i>Gr</i>	<i>Sem</i>
Animal Science	ANSC101	3		
Astronomy	ASTR 101 or 120	3		
Atmospheric Science	AOSC 123 or 200	3		
Biology	BSCI 170 or 160	3		
Bioengineering	BIOE 120	3		
Geology	GEOL 123 or 124 or 212	3		
Computer Science	CMSC 131	4		
MATH	MATH 240 or 241 or 246	4		
Engineering	ENES 100, or 102	3		

Additional requirements

A minimum of 120 credits earned and a 2.0 cumulative GPA is needed to meet University graduation requirements.

Major courses require a "C-" or better in each and a 2.0 average GPA.

The Limited Enrollment Program requirements are found at www.lep.umd.edu.