

BA CONCENTRATION in PHYSICAL CHEMISTRY

REQUIRED CHEMISTRY & CORE COURSES		Year	SEM	CR	GR	Pts	TOT P
GENERAL Chemistry I CHEM 131 OR AP Equivalent (4-5 credits)							
CHEM 131: Chemical Concepts I (5) or AP/Equiv		Fall				0.0	0.0
ORGANIC Chemistry: FIRST-YEAR ORGANIC OR STANDARD Sequence (10-11 credits)							
FIRST-YEAR ORGANIC Sequence							
CHEM 171: First-Year Organic Chemistry I (4)		Fall				0.0	0.0
CHEM 173: First-Year Organic Chemistry I LAB (1)		Fall				0.0	0.0
CHEM 172: First-Year Organic Chemistry II (4)		Spring				0.0	0.0
CHEM 208: Org Chem Lab II (1) or CHEM 210/210W: Hrs Org Chem Lab (2)		Spring				0.0	0.0
OR STANDARD Sequence							
CHEM 203: Organic Chemistry I (4)		Fall				0.0	0.0
CHEM 207: Organic Chemistry I LAB (1)		Fall				0.0	0.0
CHEM 204: Organic Chemistry II (4)		Spring				0.0	0.0
CHEM 208: Org Chem Lab II (1) or CHEM 210/210W: Hrs Org Chem Lab (2)		Spring				0.0	0.0
THEORY courses (12-13 credits)							
CHEM 251: Physical Chemistry I (4)		Fall				0.0	0.0
CHEM 252: Physical Chemistry II (4)		Spring				0.0	0.0
+ One (1) of the following courses (4-5 credits):							
CHEM 132: Chemical Concepts II (5)		Spring				0.0	0.0
CHEM 211: Inorganic Chemistry (4)		Fall				0.0	0.0
Upper-Level Laboratory Courses (6 credits)							
CHEM 232/232W: Molecular Spectroscopy (4 credits)		Spring				0.0	0.0
+ One (1) of the following courses (4 credits):							
CHEM 231W: Chemical Instrumentation (4 credits)		Fall				0.0	0.0
CHEM 244/244W: ANSEL (Advanced Nuclear Science Education Laboratory) (4 credits)		Spring				0.0	0.0
Upper-Level Courses (8 credits)							
CHEM 402: Biophysical Chemistry (2 credits)						0.0	0.0
CHEM 45X: Graduate Lecture Course in Physical Chemistry (2-4 credits)						0.0	0.0
CHEM 46X: Graduate Lecture Course in Physical Chemistry (2-4 credits)						0.0	0.0
CHEM 470: Computational Chemistry II (2 credits)						0.0	0.0
EESC 218: Introduction to Atmospheric Chemistry (4 credits)						0.0	0.0
EESC 236: Physics of Climate (4 credits)						0.0	0.0
MSC 202: Introduction to Materials Science (4 credits)						0.0	0.0
PHYS 123: Waves and Modern Physics (4 credits)						0.0	0.0
Approved 2XX OPT or PHYS courses (4-8 credits)						0.0	0.0
Optional Additional CHEM courses (NOT Required but will count in CHEM GPA)							
						0.0	0.0
						0.0	0.0
						0.0	0.0

Student: _____ Date: _____
 Class & ID#: _____ Other Major?: _____
 Email: _____ CHM GPA: _____
 AC Advisor: _____ General GPA: _____

REQUIRED ANCILLARY & ALLIED COURSES		Year	SEM	CR	GR
MATHEMATICS - 140 OR 160 Sequence (8-12 credits)					
MATH 140 Sequence					
MATH 141: Calculus I (4)					
MATH 142: Calculus II (4)					
MATH 143: Calculus III (4)					
OR MATH 160 Sequence					
MATH 161: Calculus IA (4)					
MATH 162: Calculus IIA (4)					
+ One (1) of the following courses (4 credits):					
MATH 163: Ordinary Differential Eq (4)					
MATH 165: Linear Algebra w/ Differential Equations (4)					
CSC 161: Intro to Programming (4)					
CSC 171: Intro to Computer Science (4)					
STAT 180: Intro to Applied Statistical Methodology (formerly STAT 211) (4)					
STAT 190: Intro to Statistical Methodology (formerly STAT 212) (4)					
STAT 201: Intro to Probability (4)					
PHYSICS - Two (2) of the following PHYSICS courses (8 credits)					
General Physics Sequence					
PHYS 113: General Physics I (4)					
PHYS 114: General Physics II (4)					
Mechanics and Electricity & Magnetism					
PHYS 121: Mechanics (4)					
PHYS 122: Electricity & Magnetism (4)					
Honors Mechanics and Electricity & Magnetism					
PHYS 141: Mechanics (honors) (4)					
PHYS 142: Electricity & Magnetism (honors) (4)					
Primary Writing Requirement (WRT 105 or Equivalent)					
WRTG 105 OR Equiv:					
Upper-Level Writing Requirement Satisfaction					
CHEM 2XXW CHEM ULW (choose) (4)					
XXX 2XXW 2nd ULW (4)					
Any CHEM labs taken as a W can be carried down to this area to meet this requirement. Do not duplicate credits. Students may use one writing course from another department.					

P = Planned IP = In Progress X = Complete ✓ = Section Requirements Met

Bachelor of Arts (B.A.) Program in Chemistry

The B.A. program makes fewer specification at the advanced level than the B.S. degree and encourages a wide range of elective courses. It is particularly suitable for students with interdisciplinary scientific interests in the health professions, biology, physics, geological sciences, engineering, or education. B.A. students may elect advanced courses in chemistry, including independent research, and can, thereby, create a curriculum best suited to their individual interests. For more information, please contact our Undergraduate Studies Coordinator at: ugradadm@chem.rochester.edu.

Blank POS Worksheet			
Plan Your Own POS for CHEM BA			
Total: at least 42 credit-hours in chemistry, and at least 62 credit-hours overall			
Year 1/First Year			
Fall	Cr	Spring	Cr
Year 2/Sophomore Year			
Fall	Cr	Spring	Cr
Year 3/Junior Year			
Fall	Cr	Spring	Cr
Year 4/Senior Year			
Fall	Cr	Spring	Cr
Year 5/for Take 5 Students			
Fall	Cr	Spring	Cr
AP Credit/Transfer Credit/Summer Credit			
Class	Cr	Class	Cr

Sample Program Of Studies							
While the required courses leading to a B.A. in chemistry may be scheduled with some flexibility (e.g., the mathematics and physics courses), one of the following programs are suggested:							
SAMPLE Regular Sequence POS				SAMPLE First-Year Organic Sequence POS			
Year 1/First Year				Year 1/First Year			
Fall	Cr	Spring	Cr	Fall	Cr	Spring	Cr
CHEM 131	5	CHEM 132	5	CHEM 171	4	CHEM 172	4
MATH 141/161	4	MATH 142/162	4	CHEM 173	1	CHEM 210W	2
Elective	4	Elective or PHYS 121	4	MATH 161	4	MATH 162	4
Elective	4	Elective	4	Elective	4	Elective or PHYS 121	4
				Elective	4	Elective	4
Year 2/Sophomore Year				Year 2/Sophomore Year			
Fall	Cr	Spring	Cr	Fall	Cr	Spring	Cr
CHEM 203	4	CHEM 204	4	CHEM 211	4	CHEM 234W	4
CHEM 207	1	CHEM 210W	2	PHYS 113/122	4	PHYS 114	4
PHYS 113 or PHYS 122	4	PHYS 114	4	MATH 163/165	4	Elective	4
Elective or MATH 143	4	MATH 163 or MATH 165	4	Elective	4	Elective	4
Year 3/Junior Year				Year 3/Junior Year			
Fall	Cr	Spring	Cr	Fall	Cr	Spring	Cr
CHEM 211	4	CHEM 234W	4	CHEM 251	4	CHEM 262	4
CHEM 251	4	CHEM 262	4	Upper-Level Elective	4	Elective	4
Math Elective	4	Elective	4	Math Elective	4	Elective	4
Elective	4	Elective	4	Elective	4	Elective	4
Year 4/Senior Year				Year 4/Senior Year			
Fall	Cr	Spring	Cr	Fall	Cr	Spring	Cr
Upper-Level Elective	4	Upper-Level Elective	4	Upper-Level Elective	4	Elective	4
Elective	4	Elective	4	Elective	4	Elective	4
Elective	4	Elective	4	Elective	4	Elective	4
Elective	4	Elective	4	Elective	4	Elective	4

Notes:

- Total at least 42 hours in chemistry and at least 62 credit hours overall.
- The First-Year Organic sequence is designed for first year students with good preparation in chemistry (e.g. two years of general chemistry and an Advanced Placement score 4 or 5, or equivalent preparation). This sequence fast tracks students to more advanced chemistry courses and fulfillment of degree requirements in other disciplines.
- B.A. candidates considering employment in the chemical profession or graduate work in chemistry should include: CHEM 210, 211, 231, 232, 251, and 252 in their curriculum.
- Students should speak with a chemistry advisor to tailor their programs specifically to their career goals. Particular electives that are not included in the chemistry curriculum may be required for some graduate programs.
- Students who are interested in pursuing a double major or double degree, are advised to consult the College website which outline the course overlap rules and additional credit requirements.