

OPTIONS FOR THE CHEMISTRY MAJOR - revised 7/2008

Though it is required only for the ACS Certified A.B. or the A.B. with honors, students pursuing other chemistry degrees are encouraged to enroll in 403 Supervised Research.

ACS Certified Chemistry A.B. (Recommended for grad school)	Chemistry Major A.B. only	Chemistry Minor	Chemistry Major with biochem concentration	Chemistry Major with environ concentration	Chemistry Major with geochem concentration	Chemistry Major with computational minor	Chemistry Major with education minor
Chem. 103 GenChem w/lab Chem 104 GenChem w/lab Chem. 211 OrgChem w/lab Chem 212 OrgChem w/lab Chem 221 PChemQuantum Chem 222 PChemThermo Chem 231 Inorganic Chem 242 Biochem Chem 251 Research Methodology I Chem 252 Research Methodology II Chem 3xx Chem electives Chem 3xx Chem electives Chem 403 Supervised Research I Chem 403 Supervised Research II Physics 121,122 [†] or 101,102 Math 101, 102 Math 201	Chem. 103 Chem 104 Chem. 211 Chem 212 Chem 221 Chem 222 Chem 231 Chem 242 Chem 251 Chem 252 Chem 3xx Chem 3xx Physics 121,122 [†] or 101,102 Math 101,102 Math 201	Chem. 103 Chem 104 Chem. 211 Chem 212 Chem 221* Choose 1 of 2 Chem 222* Chem 231 Choose 1 of 2 Chem 242** Chem 251 Choose 1 of 2 Chem 252 *Pre-/co-requisites: Math 201, Physics 121/122 or 101/102 **Biology majors may substitute Bio 375+376 for Chem 242	Chem. 103 Chem 104 Chem. 211 Chem 212 Chem 221 Chem 222 Choose 3 of 4 Chem 231 Chem 242 Chem 251 Chem 252 Chem 345 Chem 3xx Physics 121,122 [†] or 101,102 Math 101, 102 Math 201 Bio 201** Choose 2 of 3 Bio 375 Equivalent courses Bio 376** at Haverford may be substituted. **recommended Must have a molecular focus.	Chem. 103 Chem 104 Chem. 211 Chem 212 Chem 221 Chem 222 Choose 3 of 4 Chem 231 Chem 242 Chem 251 Chem 252 Chem 3xx Geo 302 or 397 Physics 121,122 [†] or 101,102 Math 101, 102 Math 201 Geo103 Bio 220 1 Human Landscape Course 2 Planning & Policy Courses	Chem. 103 Chem 104 Chem. 211 Chem 212 Chem 221 Chem 222 Choose 3 of 4 Chem 231 Chem 242 Chem 251 Chem 252 Chem 322 or 332 Chem 3xx Physics 121,122 [†] or 101,102 Math 101, 102 Math 201 Geo 201 Geo 202 Geo 301 or 302	Chem. 103 Chem 104 Chem. 211 Chem 212 Chem 221 Chem 222 Choose 3 of 4 Chem 231 Chem 242 Chem 251 Chem 252 Chem/CS 3xx e.g., Math. Modelinq Chem/CS 3xx of Phys. Phenomena Physics 121,122 [†] or 101,102 Math 101, 102 Math 201 CS 110 or 205 CS 206 (Data Structures) CS 231 (Discrete Math) CS 212, 225, 245, 246, Choose 1 330, 340	Chem. 103 Chem 104 Chem. 211 Chem 212 Chem 221 Chem 222 Choose 3 of 4 Chem 231 Chem 242 Chem 251 Chem 252 Chem 3xx Physics 121,122 [†] or 101,102 Math 101, 102 Math 201 Ed 200 Ed 210, 225, 240, 250, 260, or 266 Choose 1 of 6 Ed 310 Ed 311 2 education-related electives, see education advisor for options.

[†] Physics 121,122 is more mathematically rigorous and is the recommended sequence for physical scientists, but Physics 101,102 (designed for premed students) may be substituted. Students who have completed either sequence and who plan graduate work in chemistry should consider taking Physics 201.

Requirements for departmental honors:
 Complete one of the above major plans.
 Maintain a chemistry GPA of 3.7 or better. (Effective with the Class of 2010)
 Complete two semesters of 403 with a grade of 3.3 or better each semester.
 Participate in research oral/poster presentations.
 Write an acceptable thesis, and meet all department deadlines for submission of the thesis.
 Complete an additional unit of Chem 3xx (for a total of three 300-level chemistry units).
With department approval, one unit of 300-level work in certain fields may be substituted.