

CHEM - Undergraduate Catalog

(Updated 2006)

Available as a major or minor on the B.A. and B.S. degrees. Biochemistry available as a major on the B.S. degree.

Requirements for the B.S. Degree with a major in Chemistry. A minimum of 38 hours, on a 132-hour degree, consisting of CHEM 10113 and 10125 (or 10113, 10123, and 20123), 30123-30133, 30122-30132, 40091, 40123-40133, 40121-40131, 50163, 40172 or 50162, 40200 (3 hours) or 40003-40013, and one additional advanced course selected from 50282, 50133, or 50223. Professional certification by the American Chemical Society requires the inclusion of CHEM 20123, 40172, 50162, 50133, and 50282, resulting in a minimum of 43 hours of chemistry. Associated Requirements: Physics 10154 and 10164 (or 20474 and 20484); Math 10524 and 20524. Math 30524 is recommended for Chem 50282.

Requirements for the B.S. Degree with a major in Biochemistry. A minimum of 38 hours, on a 132-hour degree, consisting of CHEM 10113 and 10125 (or 10113, 10123, and 20123), 30123-30133, 30122-30132, 40091, 40123, 40121, 40200 (3 or 4 hours) or 40003-40013, 50163, 50133-50143, and 50502. Professional certification by the American Chemical Society requires the inclusion of CHEM 20123, 40172, 40133, and 40131, resulting in a minimum of 44 hours of chemistry. Associated Requirements: Biology 10504, 10514, 30603, and one of the following: Biology 40123, 40133, or 40404. Physics 10154 and 10164 (or 20474 and 20484); Math 10524 and 20524.

Requirements for the B.A. Degree with a major in Chemistry. A minimum of 24 hours consisting of CHEM 10113 and 10125 (or 10113, 10123, and 20123), 30123, 30122, 40123, 40121, 40091, and suitable electives chosen from upper level courses (30000 or above) with the exclusion of 40503, 50111, and 50120. No more than 2 hours of research (40200 or 40003-40013) may contribute to the 24-hour minimum. Any minor approved by the College of Science and Engineering is acceptable. The B.A. degree in Chemistry is devised for students with a general interest in the field who do not plan to pursue graduate studies in Chemistry. Students planning a professional career in Chemistry are strongly advised to satisfy the requirements of the B.S. degree.

Requirements for a minor in Chemistry. A minimum of 18 semester hours to include CHEM 10113 and 10125 (or 10113, 10123, and 20123), 30123-30122, 40091, and suitable electives chosen from upper level courses (30000 or above) with the exclusion of 40200, 40503, 50111, and 50120

Chemistry Degree Requirements - Summary

- **BS degree** (basic - without ACS certification) -- 38 hours minimum
 - Gen Chem (10113, 10125) 8 hours
 - or Gen Chem with Quant (10113, 10123, 20123) (or 9)
 - Organic Chem (30123-30133) and labs (30122-30132) 10
 - P Chem (40123-40133) and labs (40121-40131) 8
 - Adv Inorg (50163) 3
 - An advanced lab course (40172 or 50162) 2
 - Research (40200) 3
 - Senior Seminar (40091) 1
 - An advanced lecture course (50133, 50282, or 50223) 2 or 3
- **BS degree** (with ACS certification) -- 43 hours minimum
 - Gen Chem (10113, 10123) 6 hours
 - Quant (20123) 3
 - Organic Chem (30123-30133) and labs (30122-30132) 10
 - P Chem (40123-40133) and labs (40121-40131) 8
 - Instrumental (40172) 2
 - Adv Inorg (50163) and lab (50162) 5
 - Biochem (50133) 3
 - Adv P Chem (50282) 2
 - Research (40200) 3
 - Senior Seminar (40091) 1
- **BS degree in Biochem** -- 38 hours minimum
 - Gen Chem (10113, 10125) 8 hours
 - or Gen Chem with Quant (10113, 10123, 20123) (or 9)
 - Organic Chem (30123-30133) and labs (30122-30132) 10
 - P Chem (40123) and lab (40121) 4
 - Biochem (50133-50143) and lab (50502) 8
 - Adv Inorg (50163) 3
 - Research (40200) 3 or 4
 - Senior Seminar (40091) 1
- **BA degree in Chem** -- 24 hours minimum
 - Gen Chem (10113, 10125) 8 hours
 - or Gen Chem with Quant (10113, 10123, 20123) (or 9)
 - Organic Chem (30123) and lab (30122) 5
 - P Chem (40123) and lab (40121) 4
 - Electives (30000 and above) 5 or 6
 - Senior Seminar (40091) 1
- **Minor in Chem** -- 18 hours minimum
 - Gen Chem (10113, 10125) 8 hours
 - or Gen Chem with Quant (10113, 10123, 20123) (or 9)
 - Organic Chem (30123) and lab (30122) 5
 - Electives (30000 and above) 3 or 4
 - Senior Seminar (40091) 1

Chemistry BS (ACS Certified) and Biochemistry BS Degree Plans

Fall Semester		
Year	BS Chem - ACS	BS Biochem
1	Gen Chem 10113	Gen Chem 10113

Spring Semester		
Year	BS Chem - ACS	BS Biochem
1	Gen Chem 10123	Gen Chem 10123
	Quant* 20123	Gen Chem Lab 10122 or Quant 20123

2	Organic 30123	Organic 30123
	Organic Lab 30122	Organic Lab 30122

2	Organic 30133	Organic 30133
	Org Qual Lab 30132	Org Qual Lab 30132

3	P Chem 40123	P Chem 40123
	P Chem Lab 40121	P Chem Lab 40121
	Biochem* 50133 (or year 4)	Biochem 50133 (or year 4)

3	P Chem 40133	Biochem 50143 (or year 4)
	P Chem Lab 40131	Biochem Lab 50502 (or year 4)
	Chem Instr* 40172 (or year 4)	

4	Adv Inorg 50163 (or year 3)	Adv Inorg 50163 (or year 3)
	Adv Inorg Lab* 50162 (or year 3)	Research 40200 (1 hr)
	Research* 40200 (1 hr)	Senior Seminar 40091
	Senior Seminar 40091	

4	Adv P Chem* 50282	Research 40200 (2 or 3 hr)
	Research* 40200 (2 hr)	

Hours	22	20
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Hours	21	18
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*Courses required for ACS Certification.