

ACS-Certified Chemistry Major Requirements (59 hours)

Chemistry Foundation: General, Analytical, Biochemistry, Inorganic, Organic, Physical (36 hours)			
Course Name	Credit Hours	Offered	Prereqs
CHM 108: General Chemistry I with lab	3-2-4	Fall, Spring	
CHM 109: General Chemistry II with lab	3-3-4	Spring	CHM 108
CHM 221: Organic Chemistry I with lab	3-3-4	Fall	CHM 108
CHM 222: Organic Chemistry II with lab	3-3-4	Spring	CHM 221 or 223
CHM 305I: Inorganic Chemistry with lab	3-3-4	Spring	CHM 109, CHM 222 or CHM 224, RHW 102
CHM 315: Analytical Chemistry with lab	3-3-4	Fall	CHM 109
CHM 331I: Physical Chemistry Foundations with lab	3-3-4	Fall	CHM 109, year physics, MAT 201 (MAT 203 helpful), RHW 102
CHM 332: Physical Chemistry II Applications with lab	3-2-4	Spring even	CHM 331
CHM 341: Biochemistry I	3-0-3	Fall	CHM 109, CHM 222 or 224
CHM 390: Seminar	1-0-1	Fall, Spring	Jr/Sr Standing

Note: CHM 332 and CHM 341 will satisfy the two chemistry electives required for the standard chemistry major. CHM 305 and CHM 331 will satisfy Berry's Writing Across the Curriculum requirement (RHW 102 prereq).

Supporting Cognate Coursework (16 hours)	Credit Hours	Offered	Prereqs
MAT 201: Calculus I	4-0-4	Fall/Spring	C or better in MAT 120 or consent of instructor
MAT 203: Multivariable Calculus	4-0-4	Fall/Spring	C or better in MAT 201
PHY 211: General Physics I with Calculus with lab	3-2-4	Fall	Coreq: MAT 201
PHY 212: General Physics II with Calculus with lab	3-2-4	Spring	Coreq: MAT 203

Note: ACS-certified majors must take MAT 203 (as opposed to MAT 111).

Note: Students must complete 1 year of physics. Calculus-based physics is strongly recommended by the ACS.

Additional In-depth Courses Required for ACS Certification (7 hours)			
Both CHM 222 and CHM 332 (listed above) count as in-depth coursework towards ACS-certification. Students seeking ACS approval must also choose one course from the first group below and complete at least 3 credit hours of research to meet both the ACS in-depth course credit and laboratory hour requirements. If a lecture-only course is chosen below (CHM 342 or CHM 475) the student must complete CHM 343 (Experimental Biochemistry) or an additional credit hour of CHM 494 to meet the ACS laboratory hours requirement. HON 450/451, CHM 451, or CHM 496 will also be considered for research hours provided the thesis project or academic internship is chemical research and results in a formal report.			
Course Name	Credit Hours	Offered	Prereqs
CHM 342: Biochemistry II; or	3-0-3	Spring	CHM 341
CHM 411: Instrumental Analysis with lab; or	3-3-4	Spring odd	CHM 222, CHM 315
CHM 421: Advanced Organic with lab; or	3-3-4	Spring odd	CHM 222
CHM 475I: Medicinal Chemistry	3-0-3	Spring even	CHM 341, RHW 102
CHM 494: Undergraduate Research (or HON 450/451)	3 or 4 credit hours	Fall, Spring	Consent of instructor

Note: Students only need an additional 7-9 hours of coursework beyond the standard chemistry major requirements to earn ACS certification.

Note: Before Fall 2021, undergraduate research was done under CHM 498 (Directed Study).