

BS Chemistry Checklist

This major only requires 56 upper division credits, must have 60 upper division credits to graduate.

General Chemistry Credits: 15 (taken in sequence)		
Course Name (prerequisites)	Credits	Term
CHEM 181 – General Chemistry I	4	
CHEM 181Lab – General Chemistry Laboratory I	1	
CHEM 182 – General Chemistry II <i>(minimum of C- in MATH 153 or qualify for MATH 154 on compass Test)</i>	4	
CHEM 182Lab – General Chemistry Laboratory II	1	
CHEM 183 – General Chemistry III	4	
CHEM 183Lab – General Chemistry Laboratory III --OR-- CHEM 193Lab – General Chemistry III Honors Laboratory	1	

Physics Credits: 15 (taken in sequence)		
Course Name (prerequisites)	Credits	Term
PHYS 111, PHYS 121, or PHYS 181 with lab <i>(variable)</i>	5	
PHYS 112, PHYS 122, or PHYS 182 with lab <i>(variable)</i>	5	
PHYS 113, PHYS 123, or PHYS 183 with lab <i>(variable)</i>	5	

Calculus Credits: 15 (taken in sequence)		
Course Name (prerequisites)	Credits	Term
MATH 172: Calculus I <i>(MATH 154 or qualified for MATH 172 on compass test)</i>	5	
MATH 173: Calculus II	5	
MATH 272: Multivariable Calculus I	5	

Organic Chemistry Credits: 13 (taken in sequence)		
Course Name (prerequisites)	Credits	Term
CHEM 361 – Organic Chemistry I	3	
CHEM 361Lab – Organic Chemistry Laboratory I	2	
CHEM 362 – Organic Chemistry II	3	
CHEM 363 – Organic Chemistry III	3	
CHEM 363Lab – Organic Chemistry Laboratory II	2	

Physical Credits: 15 (taken in sequence)		
Course Name (prerequisites)	Credits	Term
CHEM 381 – Physical Chemistry I <i>(CHEM 183 and CHEM 183Lab, MATH 272, and PHYS 113/123/183 w/ lab)</i>	5	
CHEM 382 – Physical Chemistry II	3	
CHEM 382Lab – Integrated Physical/Inorganic Laboratory I	2	
CHEM 383 – Physical Chemistry III	3	
CHEM 383Lab – Integrated Physical/Inorganic Laboratory II	2	

Additional Required Upper Division Credits: 19		
Course Name (prerequisites)	Credits	Term
CHEM 332 – Quantitative Analysis (CHEM 183 / 183Lab)	3	
CHEM 332Lab – Quantitative Analysis Laboratory	2	
CHEM 350 – Inorganic Chemistry (CHEM 183, PHYS 113/123/183)	3	
CHEM 431 – Biochemistry I (CHEM 362)	3	
CHEM 431Lab – Biochemistry Laboratory I (Chem 361Lab)	2	
CHEM 452 – Instrumental Analysis (CHEM 332 / 332Lab)	3	
CHEM 452Lab – Instrumental Analysis Laboratory	2	
CHEM 488 – Colloquium (expected in winter or spring of final year)	1	

Department Approved Electives: 9 Credits Required		
Note: in order to receive the ACS-certified degree, the electives must include at least 1 lab credit.		
Course Name (prerequisites)	Credits	Term
CHEM 345 – Environmental Chemistry (CHEM 183)	5	
CHEM 432 – Biochemistry II (CHEM 431)	3	
CHEM 433 – Biochemistry III (CHEM 431)	3	
CHEM 433Lab – Biochemistry Laboratory II (CHEM 431lab and co-req of CHEM 433)	2	
CHEM 473 – Transition Metal Chemistry (CHEM 350/382)	3	
CHEM 490 – Cooperative Education (Prior Approval)		
CHEM 492 – Laboratory Experience in Teaching Chemistry	2 (max)	
CHEM 295, 395, or 495 – Research**	6 max	
CHEM 500 level course with instructor permission		

**** A combined maximum of 6 credits of CHEM 295, 395, and 495 may be applied towards the degree. In order for research credits to count towards the ACS certified degree, the student is required to turn in a comprehensive research report prior to graduation.**