

# BA Biochemistry Checklist

This major only requires 42-43 upper division credits, must have 60 upper division credits to graduate.

<b>General Chemistry Credits: 15 (taken in sequence)</b>		
<b>Course Name (prerequisites)</b>	<b>Credits</b>	<b>Term</b>
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	

<b>General Biology Credits: 15 (taken in sequence)</b>		
<b>Course Name (prerequisites)</b>	<b>Credits</b>	<b>Term</b>
BIOL 181: General Biology I <i>(CHEM 181: can be co-requisite)</i>	5	
BIOL 182: General Biology II <i>(CHEM 182: can be co-requisite)</i>	5	
BIOL 183: General Biology III <i>(CHEM 183: can be co-requisite)</i>	5	

<b>Physics Credits: 10 (taken in sequence)</b>		
<b>Course Name (prerequisites)</b>	<b>Credits</b>	<b>Term</b>
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	

<b>Calculus Credits: 5</b>		
<b>Course Name (prerequisites)</b>	<b>Credits</b>	<b>Term</b>
MATH 172: Calculus I <i>(MATH 154 or qualified for MATH 172 on compass test)</i>	5	

<b>Organic Chemistry Credits: 13 (taken in sequence)</b>		
<b>Course Name (prerequisites)</b>	<b>Credits</b>	<b>Term</b>
CHEM 361 – Organic Chemistry I <i>(Chem 183, as either a prerequisite or a co-requisite)</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	

<b>Biochemistry Credits: 13 (taken in sequence)</b>		
<b>Course Name (prerequisites)</b>	<b>Credits</b>	<b>Term</b>
CHEM 431 – Biochemistry I <i>(CHEM 362)</i>	3	
CHEM 431Lab – Biochemistry Laboratory I	2	
CHEM 432 – Biochemistry II	3	
CHEM 433 – Biochemistry III	3	
CHEM 433Lab – Biochemistry Laboratory II	2	

<b>Additional Required Upper Division Credits: 6</b>		
<b>Course Name (prerequisites)</b>	<b>Credits</b>	<b>Term</b>
CHEM 332 – Quantitative Analysis (CHEM 183/ 183Lab)	3	
CHEM 332Lab – Quantitative Analysis Laboratory	2	
CHEM 488 – Colloquium (expected in winter or spring of final year)	1	

<b>Department Approved Electives: 10+ Credits Required</b>		
<b>Course Name (prerequisites)</b>	<b>Credits</b>	<b>Term</b>
CHEM 350 – Inorganic Chemistry (CHEM 183, PHYS 113/123/183)	3	
CHEM 381 – Physical Chemistry I (CHEM 183 and CHEM 183Lab, MATH 272, and PHYS 113/123/183 w/ lab)	5	
CHEM 382 – Physical Chemistry II (CHEM 381) – AND -- CHEM 382Lab – Integrated Physical/Inorganic Laboratory I *lecture and lab must be taken together*	5	
CHEM 452 – Instrumental Analysis (CHEM 332) – AND – CHEM 452Lab – Instrumental Analysis Laboratory (CHEM 322Lab) *lecture and lab must be taken together*	5	
CHEM 492 – Laboratory Experience in Teaching Chemistry *requires permission from instructor*	2 (max)	
CHEM 395/495 – Research	1 - 6	
BIOL 321 – Genetics (BIOL 183 and BIOL 213 or by permission)	5	
BIOL 323 – Microbiology (BIOL 213 and BIOL 183)	5	
BIOL 425 – Molecular Biotechnology (BIOL 321)	5	
BIOL 426 – Medical Microbiology (BIOL 323) -- AND -- BIOL 426Lab – Medical Microbiology Laboratory *lecture and lab must be taken together*	5	
BIOL 430 – Cell Biology (CHEM 361/361Lab and BIOL 182)	5	
PHYS 322 – Molecular Biophysics (PHYS 113, 123 or 183 and MATH 173)	4	
PHYS 323 – Experimental Biophysics (PHYS 323)	4	