Biochemistry BS/BA Course Requirements (2023)

An undergraduate degree in Biochemistry provides students with significant flexibility to fashion a degree to meet their educational goals. A student who receives a Biochem degree will be prepared to enter the workforce in a wide variety of areas that include pharmaceutical sciences & biotechnology, or to pursue advanced degrees in the biochemical sciences. Students will explore biophysical and biochemical aspects of life processes at the molecular level & select electives that provide depth and breadth.

<table>
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<tr>
<th>1st Fall</th>
<th>1st Spring</th>
<th>2nd Fall</th>
<th>2nd Spring</th>
<th>3rd Fall</th>
<th>3rd Spring</th>
<th>4th Fall</th>
<th>4th Spring</th>
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</table>
| Chem 1210<sup>1</sup>  
Gen Chem 1  
4 cr.  
F,S,U | Chem 1220<sup>1</sup>  
Gen Chem 2  
4 cr.  
F,S,U | Chem 2310<sup>1</sup>  
Org Chem 1  
4 cr.  
F,S,U | Chem 2320<sup>1</sup>  
Org Chem 2  
4 cr.  
F,S,U | Chem 3510  
Biochem 1  
3 cr.  
F,S,U | Chem 3520  
Biochem 2  
3 cr.  
S | Chem 3070  
Thermodynamics  
4 cr.  
F,S | Chem 3060 or 3090  
Quan or Biophys  
F,S or S  
4 cr. |
| Chem 1215<sup>1</sup>  
Gen Chem 1 Lab  
1 cr.  
F,S,U | Chem 1225<sup>1</sup>  
Gen Chem 2 Lab  
1 cr.  
F,S,U | Chem 1225  
Gen Chem 2 Lab  
1 cr.  
F,S,U | Chem 1225  
Gen Chem 2 Lab  
1 cr.  
F,S,U | Adv Lab<sup>3</sup>  
2 cr.  
F,S | Biochem Lab<sup>3</sup>  
2-3 cr.  
F,S | Chem 3000 or 3100  
QA or Inorg  
F,S,U or F  
4 cr. | Biochem Elective<sup>4</sup>  
3 cr.  
F,S |
| Math 1210<sup>2</sup>  
Calculus 1  
4 cr.  
F,S,U | Math 1220<sup>2</sup>  
Calculus 2  
4 cr.  
F,S,U | Math 2210<sup>2</sup>  
Calculus 3  
3 cr.  
F,S,U | Wrtg 3014  
Sci Writing  
3 cr.  
F,S,U CW | Phys 2210  
Phys S&E 1  
4 cr.  
F,S,U | Phys 2220  
Phys S&E 2  
4 cr.  
F,S,U | Adv Lab<sup>3</sup>  
2 cr.  
F,S | Biochem Elective<sup>4</sup>  
2-3 cr.  
F,S |
| Chem 2000/4000  
UG Seminar  
1 cr.  
F | Biol 1610  
Fund Biology 1  
4 cr.  
F,S,U | | | | | |

1) Honors versions are available. Sequence starts in the fall. Must apply to add the class.
2) Talk with advisors to see how other calculus sequences fulfill this requirement.
3) 3 upper division labs required:
   - Fall options: Chem 5710 (org, 1<sup>st</sup> half), Chem 5730 (inorg, 2<sup>nd</sup> half), Chem 3525 (molecular DNA lab, full)
   - Spring options: Chem 5700 (analytical, 1<sup>st</sup> half), Chem 5750 (chembio, 1<sup>st</sup> half), Chem 5720 (pchem, 2<sup>nd</sup> half), Chem 3515 (biochem, full)
   - 2 Credits of one of the following fulfill one Advanced Lab: Chem 4800, Chem 4965, or CHEM 4999
4) Total of 8 Hours of biochemistry electives needed. Check Degree Audit for options. Meet with advisor to have questions answered.
5) Your ePortfolio should be started after finishing Ochem 2 and can be found on Canvas. If you do not have access, please reach out to an advisor.