Chemistry Course Requirements - Biological Emphasis (2018-2019)

The Biological emphasis has more biology electives and less math. Satisfies many of the prerequisites for students planning to attend health related post-bachelor’s schools, such as medical, dental, pharmaceutical, or wanting to pursue graduate school in medical or biological chemistry.

1st Year Fall
CHEM 1210^1
Gen Chem I
4 cr. F, S, U
SF

1st Year Spring
CHEM 1220^1
Gen Chem II
4 cr. F, S, U
SF

2nd Year Fall
CHEM 2310^1
Org Chem I
4 cr. F, S, U

2nd Year Spring
CHEM 2320^1
Org Chem II
4 cr. F, S, U

3rd Year Fall
CHEM 2325
Quant Analysis
4 cr. F, S, U
CWQI

3rd Year Spring
CHEM 3060
Quantum Chem
4 cr. F, S QI

4th Year Fall
CHEM 3510
Biochemistry I
3 cr. F, S, U

4th Year Spring
CHEM 3520
Biochemistry II
3 cr. S

MATH 1210^2
Calculus I
4 cr. F, S, U
QR

MATH 1220^2
Calculus II
4 cr. F, S, U
QR

MATH 2210^2
Calculus III
3 cr. F, S, U
QR

WRTG 3014
Sci. Writing
3 cr. F, S, U
CW

PHYS 2210^3
Physcs for S&E I
4 cr. F, S, U
SF

PHYS 2220^3
Physcs for S&E II
4 cr. F, S, U
SF

BIOL 2020
Cell Biology
3 cr. F, S

BIOL 2030
Genetics
3 cr. F, S

BIOL 3XXX^5
Biology Elective
3 cr. F, S, U

BIOL 3XXX^5
Biology Elective
2 cr. F, S, U

CHEM 1215^1
Gen Chem I Lab
1 cr. F, S, U

CHEM 1225^1
Gen Chem II Lab
1 cr. F, S, U

CHEM 2315
Org Chem I Lab
2 cr. F, S, U

CHEM 2325
Org Chem II Lab
2 cr. F, S, U

CHEM 3000
Quant Analysis Lab
4 cr. F, S, U

CHEM 3100
Inorganic
5 cr. F, S

CHEM 3510^5
Biochemistry Lab
2-3 cr. F, S

CHEM 57XX^4
Adv. Lab
2 cr. Half Sem

CHEM 57XX^4
Adv. Lab
2 cr. Half Sem

CHEM 2000/4000
UG Seminar
1 cr. F, S

PHYS 2215
Phys S&E Lab I
1 cr. F, S

PHYS 2225
Phys S&E Lab II
1 cr. F, S

1) Honors versions of available. Sequence starts in the Fall. Must apply to be in the class.
2) Talk with advisors to see how other calculus sequences could fulfill the calculus requirement.
3) Honors versions are PHYS 3210 + 3220.
4) 2 upper division labs required. Fall options: CHEM 5710 (org) 1st half, CHEM 5730 (inorg) 2nd half. Spring options:
   CHEM 5700 (ana) 1st half, CHEM 5720 (phys) 2nd half, CHEM 3200 (radiochem) + NUCL 4000 Spring + Fall.
5) Need at least 5 credits of biology-related electives. Check Degree Audit to see accepted biology electives. Contact
   chemistry advisors to determine if a course not listed could fulfill this requirement. CHEM 4800 (research), CHEM 4999
   (Honors Thesis), or CHEM 4965 (internship) can waive 2 credits.
6) For biochemistry labs, students can take CHEM 3515 (Biochemistry Lab, Spring), 3525 (Molecular Biology of DNA Lab,
   Fall), or CHEM 5750 (Adv. Chemical Biology Lab, 1st half Spring)
Chemistry Course Requirements – Biological Emphasis (2018-19)

The Biological emphasis has more biology electives and less math. Satisfies many of the prerequisites for students planning to attend health related post-bachelor’s schools, such as medical, dental, pharmaceutical, or wanting to pursue graduate school in medical or biological chemistry.

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Credit Hours</th>
<th>Gen Ed/ Bac Req</th>
<th>Prerequisites</th>
<th>Taught</th>
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<td>BIOL 2030 Genetics</td>
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</table>

◊: Can take whichever calculus sequence is appropriate, talk to advisor about sequencing.

₸: Honors versions of General Chemistry are CHEM 1211 + 1221. Sequence starts in the Fall. Must apply to be in the class.

⌂: Honors versions are PHYS 3210 + 3220.

○: Honors versions of Organic Chemistry are CHEM 2311 + 2321. Sequence starts in the Fall.

∆: Honors versions of Organic Chemistry are CHEM 2311 + 2321. Sequence starts in the Fall.

♦: Can also take CHEM 3515 (Biochemistry Lab) or 3525 (Molecular Biology of DNA Lab) in place of CHEM 5750, to count for 3 advanced lab credits.

†: CHEM 4800 (research), CHEM 4965 (internship), or CHEM 4999 (Honors Thesis) can count for up to 2 credit hours of biology elective.