

## Possible pathways for earning a major in Biochemistry

Pathways include both **major** and LS&A requirements.

- 10 credits of Physics required for the major will fulfill all of the NS distribution requirements.
- Math prerequisites will fulfill QR1 and Mathematical and Symbolic Analysis requirements.
- Choose a HU, SS, or other course to fulfill the Race and Ethnicity requirement
- ULWR may be fulfilled with CHEM 353 or CHEM 482 (advanced lab) or another course

For graduate school and industrial careers, research experience is very important. Students are encouraged to earn 4 credits of undergraduate research (CHEM 398) as well as 4 additional credits under CHEM 399.

Pre-health students: Psych 111 and Soc 100 or 302 should be chosen for SS credits

Bio 173 is needed

Stats 250 is highly recommended

### Path A Starting in Organic Chemistry freshman year

Year 1 Fall	credit hours	Year 1 Winter	credit hours
CHEM 210 Organic I	3	Language 1	4
CHEM 211 Organic I Lab	2	CHEM 215 Organic II	3
Math 115 Calc 1	4	CHEM 216 Organic II Lab	2
FYWR	4	Biol 172 Molecular, Cellular, Developmental	4
HU	3	SS	3
	16		16
Year 2 Fall		Year 2 Winter	
Language 2	4	Language 3	4
Math 116 Calc 2	4	Phys 135	4
CHEM 351 Biochemistry	4	Phys 136 Lab	1
HU	4	Biol 171 Ecology and Evolution	4
		Other credits	3
	16		16
Year 3 Fall		Year 3 Winter	
Language 4	4	CHEM 260 Chemical Principles	3
CHEM 262 Mathematical Methods	4	CHEM 451 Adv. Biochem I	4
Phys 235	4	CHEM 353 ULWR Biochem Lab	3
Phys 236 Lab	1	CHEM 398 Undergrad Research	1
CHEM 398 Undergrad Research	2	SS	4
	15		15
Year 4 Fall		Year 4 Winter	
CHEM 453 Biophysical Chem	3	CHEM 452 Adv. Biochem II	4
Elective 1	3	Biology 305 Genetics	4
CHEM 241 or 245 or 302 or 303 Analytical or Inorganic	2-3	Elective 2	3
CHEM 398 Undergrad Research	1	Other credits	3
HU/SS/CE/ID	3		
	12-13		14

**Path B\* Organic Chemistry sophomore year**

**\*no research**

Year 1 Fall		credit hours	Year 1 Winter		credit hours
Language 1		4	Language 2		4
FYWR		4	CHEM 125/126 General Chemistry Lab		2
Bio 171 Ecology and Evolution		4	CHEM 130 General Chemistry		3
Math 115 Calc I		4	Bio 172 Molecular, Cellular, Developmental		4
			Math 116 Calc II		4
		16			17
Year 2 Fall			Year 2 Winter		
Language 3		4	Language 4		4
CHEM 210 Organic I		3	CHEM 215 Organic II		3
CHEM 211 Organic I Lab		2	CHEM 216 Organic II Lab		2
Physics 135		4	CHEM 262 Mathematical Methods		4
Physics 136 Lab		1	SS		3
HU		3			
		16			16
Year 3 Fall			Year 3 Winter		
CHEM 351 Biochemistry		4	CHEM 260 Chemical Principles		3
Phys 235		4	CHEM 451 Adv. Biochem I		4
Phys 236 Lab		1	CHEM 353 ULWR Biochem Lab		3
CHEM 241 or 245 or 302 or 303 Analytical or Inorganic		2-3	SS		4
HU		4			
		15-16			14
Year 4 Fall			Year 4 Winter		
CHEM 453 Biophysical Chemistry		3	CHEM 452 Adv. Biochem II		4
Elective 1		3	Biology 305 Genetics		4
Advanced Lab Elective		3	Elective 2		3
HU/SS/CE/ID		3	Other credits		3
		12			14