

Biochemistry BA and BS degree requirement changes (approved for 2023-2024 General Bulletin)

New major requirements

- have been approved for the 2023-24 General Bulletin
- will be updated in SIS during summer 2023
- will apply to new students matriculating at CWRU fall 2023 or later
- **will not affect current CWRU students unless they request to switch to the 2023-24 General Bulletin for their degree requirements**

New optional tracks

- have also been approved for the 2023-24 General Bulletin
- tracks are:
 - Cancer Biology
 - Infectious Disease
 - Metabolism
 - Computational Health Science

New Biochemistry BS and BA: required courses by subject (approved for 2023-2024 General Bulletin)

	<u>For both BS and BA</u>	<u>BS- or BA- specific</u>
Biochemistry	BIOC 101, 307, 308, 373, 391, 393 2 of BIOC 312, 334, or 350	BS: 3 approved technical electives BA: 2 approved technical electives
Biology	BIOL 214, 214L, 215, 215L	
Chemistry	CHEM 105/111, 106/ENGR 145, 113 CHEM 223/323, 224/324, 233, 234	
Computer Science	ENGR 131/CSDS 132	
Math		BS: MATH 121, 122/124 BA: MATH 125/121, 126/122/124
Physics		BS: PHYS 121/123, 122/124 BA: PHYS 115/121, 116/122
Statistics		BS: STAT 312/312R/313 BA: STAT 201/312/312R/313
Arts & Sciences	new General Education requirements	
Open electives	at least 6 open electives, can complete any minor	

Total required credits; 125 for BS and 120 for BA

New Biochemistry BA and BS: sample plan of study (approved for 2023-2024 General Bulletin)

	<u>For both BS and BA</u>	<u>BS- or BA- specific</u>
Year 1	BIOC 101 BIOL 214, 214L, 215, 215L CHEM 105/111, 106/ENGR 145, 113 GER	BS: MATH 121, 122/124 BS: PHYS 121/123 BA: MATH 125/121, 126/122/124
Year 2	CHEM 223/323, 224/324, 233, 234 ENGR 131/CSDS 132 GER	BS: PHYS 122/124 BS: STAT 312/312R/313 BA: PHYS 115, 116/122/124 BA: STAT 201/312/312R/313
Year 3	BIOC 307, 308, 391 1 or more of BIOC 312/334/350 or approved technical elective(s) GER, open electives	
Year 4	BIOC 373, 393 2 or more of BIOC 312/334/350 or approved technical elective(s) GER, open electives	

Total required credits; **125 for BS and 120 for BA**

New Biochemistry BA and BS: optional tracks (approved for 2023-2024 General Bulletin)

Track

3 Required courses

Cancer Biology

BIOC 350 “Molecular basis of cancer”

BIOC 353 “Biochemical pathways in cancer therapeutics”

BIOC 360 “Advanced technologies for cancer research”

Infectious Disease

BIOC 334 “Structural & computational biology”

BIOC 310 “Microbial physiology & therapeutic opportunities”

BIOC 311 “Antimicrobial therapies & resistance”

Metabolism

and 2 of:

BIOC 312 “Proteins and enzymes”

BIOC 315 “Biological membranes and their proteins”

BIOC 344 “Molecular endocrinology”

BIOC 345 “Metabolic dysregulation and human disease”

Computational Health Science

BIOC 334 “Structural & computational biology”

PQHS 431 “Statistical methods I”

PQHS 457 “Current issues in genetic epidemiology:
design & analysis of sequencing studies”