

BIOCHEMISTRY
Bachelor of Arts
(B.A.)

Requirements for Major: At least 32 credit hours in the department, including:

CH 151 Fundamentals of Chemistry I; 5 credit hours	Offered:	Fall
CH 152 Fundamentals of Chemistry II; 5 credit hours		Spring
CH 340 Organic Chemistry I; 3 credit hours		Fall
CH 341 Organic Chemistry II; 3 credit hours		Spring
CH 342 Organic Chemistry Laboratory I; 2 credit hours		Fall
CH 343 Organic Chemistry Laboratory II; 2 credit hours		Spring
CH 350 Biochemistry I; 3 credit hours		Fall
CH 351 Biochemistry Laboratory I; 2 credit hours		Fall
CH 352 Biochemistry II; 3 credit hours		Spring
CH 353 Biochemistry Laboratory II; 2 credit hours		Spring
CH 390 Undergraduate Chemical Research; 1 credit hour	Fall/Spring/Summer	
CH 391 Chemistry Seminar; 1 credit hour		Spring

Six cognate/correlated courses in Natural Sciences/Mathematics:

BI 102 General Cellular Biology; 5 credit hours	Offered:	Fall/Spring
BI 301 General Microbiology (Not a General Education course); 4 credit hours		Fall/Spring
BI 333 General Genetics (Not a General Education course); 4 credit hours		Fall/Spring
BI 354 Molecular Biology Laboratory (Not a General Education course); 3 credit hours		Spring
PS 261 College Physics I & PS 262 College Physics II (Not a Gen. Education course); 5 credit hrs	PS261 Fall/PS262 Spring	
Or PS 281 General Physics I & PS 282 General Physics II (Not a Gen. Ed. course); 5 credit hrs	PS281 Spring/PS282 Fall	

Note

Research (CH 390) must be initiated at least one semester prior to the semester of graduation
A written report of research or internship is required of all majors

General Education Distribution Requirements (BA):

Humanities (15) (GEHU/GECPA) (Max 6 hours/ discipline)	Course Number	Social Sciences (15) (GESS) (Max 6 hours/ discipline)	Course Number	Natural Sciences/ Mathematics (12) (GENS) (Max 8 Hours or 2 Courses/Discipline)	Course Number
Fine Arts (3)		Soc. Science 1 (3)		BI 102 (5)	
Humanities 2 (3)		Soc. Science 2 (3)		PS 261 (5)	
Humanities 3 (3)		Soc. Science 3 (3)		Nat. Science 3 (3-5)	
Humanities 4 (3)		Soc. Science 4 (3)			
Humanities 5 (3)		Soc. Science 5 (3)			

Core University/BA-Specific Requirements:

WU 101 (3)* C or Better		Total Hours (124)	
EN 101 (3) C or Better		Hours Outside Major (84)	
EN 300 (3) C or Better		Upper Division (300 and above) (45)	
MA 112 or MA 116 (3)** C or Better		Hours Within Arts and Sciences (99)	
>= 2.0 Overall Cumulative GPA		>= C Grade All Major and Correlated Courses	
FL 102 (4)			

**Students transferring with 24 or more credit hours completed at an accredited post-secondary institution (after graduating from High School) with a GPA of 2.0 or higher are exempt from this requirement*

***May be waived if the student successfully places into a higher-level mathematics course with an ACT score of 25 or higher and then successfully completes that course with a grade of C or higher or if a student presents an ACT score in mathematics of at least 28 (SAT of at least 640).*

Please direct questions to:

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<http://www.washburn.edu/chemistry>

rev: 10-2021



Sample 4-Year Schedule for Biochemistry Major
Bachelor of Arts
120 Hours

Sample curriculum for students starting in an even numbered academic year. Individual four-year degree plans are developed for each student upon consultation with an academic advisor.

Freshman			
Fall Semester		Spring Semester	
CH 151 – Fundamentals of Chemistry I	5	CH 152 – Fundamentals of Chemistry II	5
MA 116 – College Algebra	3	EN 101 – First Year Writing	3
WU 101 – Washburn Experience	3	MA 117 – Trigonometry	3
BI 102 – General Cellular Biology	5	BI 301 – General Microbiology	4
TOTAL	16	TOTAL	15
Sophomore			
Fall Semester		Spring Semester	
CH 340 – Organic Chemistry I	3	CH 341 – Organic Chemistry II	3
CH 342 – Organic Chemistry I Lab	2	CH 343 – Organic Chemistry II Lab	2
PS 261 – College Physics I	5	PS 262 – College Physics II	5
FL 101 – Foreign Language I	4	Humanities General Education	3
		FL 102 – Foreign Language II	4
TOTAL	14		17
Junior			
Fall Semester		Spring Semester	
EN 300 – Advanced College Writing	3	CH 352 – Biochemistry II	3
CH 350 – Biochemistry I	3	CH 353 – Biochemistry II Lab	2
CH 351 – Biochemistry I Lab	2	BI 354 – Molecular Biology Lab	3
Humanities General Education	3	Soc. Sci. General Education	3
Soc. Sci. General Education	3	BI 333 – General Genetics	4
CH 390 – Chemistry Research	1		
TOTAL	15	TOTAL	15
Senior			
Fall Semester		Spring Semester	
Soc. Sci. General Education	3	CH 391 – Chemistry Seminar	1
Humanities General Education	3	Humanities General Education	3
Upper Division Elective	3	Soc. Sci. General Education	3
Upper Division Elective	3	Upper Division Elective	3
Soc. Sci. General Education	3	Humanities General Education	3
TOTAL	15		13

Required research completed prior to the semester of graduation.