

BIOCHEMISTRY MAJOR (CHEBI.BS)

<u>Required Courses</u>		<u>Hrs.</u>	<u>Prereq.</u>	<u>Rec.Yr.</u>
BIOL 163	Principles of Molecular Biology	4		Fr
BIOL 250	Genetics	4	C- or better in BIOL 163 for Biochemistry Maj	Fr
BIOL 354	Molecular Cell Biology	4	BIOL 250, CHEM 221, 223L	Jr
<u>One course from the following:</u>				
BIOL 360	Principles of Microbiology	4	BIOL 250, CHEM 221, 223L	Jr
BIOL 374	Immunology	3	BIOL/CHEBI/CHEM/EXSC major	Jr
CHEM 363	Neurochemistry	3	CHEM 350	Jr
CHEM 131	Gen Chemistry for Sci Majors I	3	*Coreq CHEM 133L	Fr
<i>*Prerequisite: Must have passed at least one year of high school chemistry or one semester of college chemistry equivalent to CHEM 105/107L or above AND at least one of the following: MATH ACT score of 20, MATH SAT score of 500, grade of C or better in one of the classes: MATH 103, 110, 112, 115, 130, 161.</i>				
CHEM 133L	Gen Chemistry for Sci Maj I Lab	1	Coreq CHEM 131	
CHEM 132	Gen Chemistry for Sci Majors II	3	C- or better in CHEM 131, 133L	Fr
CHEM 134L	Gen Chemistry for Sci Maj II Lab	1	Coreq CHEM 134L	
	<u>OR</u>		Coreq CHEM 132	
CHEM 161	Acc Gen Chem for Science Majors	3	HS Chem & placement or CHEM 105, 107L; Coreq CHEM 163L	Fr
CHEM 163L	Acc Gen Chem for Science Maj Lab	1	HS Chemistry & placement or CHEM 105, 107L; Coreq CHEM 161	Fr
CHEM 221	Organic Chemistry I	3	C- or better in CHEM 131, 133L, 132, 134L or 161,163L; Coreq CHEM 223L	Soph
CHEM 223L	Organic Chemistry I Lab	1	C- or better in CHEM 131, 133L, 132, 134L or 161, 163L; Coreq CHEM 221	
CHEM 222	Organic Chemistry II	3	C- or better in CHEM 221, 223L; Coreq 224L	Soph
CHEM 224L	Organic Chemistry II Lab	1	CHEM 221, 223L; Coreq CHEM 222	
CHEM 231	Analytical Chemistry	3	C- or better in CHEM 131, 133L, 132, 134L or 161,163L : Coreq 233L	Soph/Jr
CHEM 233L	Analytical Chemistry Lab	1	C- or better in CHEM 131, 133L, 132, 134L or 161,163L; Coreq 231	
CHEM 301	Laboratory Safety Management	1	CHEM 222, 224L	Jr
CHEM 320	Physical Chemistry	3	C- or better in CHEM 231, 233L, MATH 161 or 162; Coreq CHEM 322L	Jr
CHEM 322L	Physical Chemistry Lab	1	C- or better in CHEM 231, 233L, MATH 161 or 162; Coreq CHEM 320	Jr
CHEM 340	Advanced Inorganic Chemistry	3	C- or better in CHEM 222, 224L, 231, 233L	Jr
CHEM 350	Biochemistry I	3	C- or better in CHEM 222, 224L or BIOL 354	Jr
CHEM 351L	Biochemistry I Lab	1	C- or better in CHEM 222, 224L; Coreq CHEM 350	
CHEM 352	Biochemistry II	3	C- or better in CHEM 350, 351L; Coreq CHEM 353L	Jr
CHEM 353L	Biochemistry II Lab	1	C- or better in CHEM 350, 351L; Coreq CHEM 352	Jr
CHEM 397/399	Research or Summer Research	0-2	CHEM 221, 223L, 231, 233L	Jr
^CHEM 497	Seminar	2	Sr Standing	Sr
MATH 115	Elementary Statistics	3		Fr
MATH 161	Calculus I	4	C or better in MATH 130 or placement	Fr
PHYS 151	General Physics I	4	Official math placement or P/I	Soph
	<u>OR</u>			
PHYS 161	General Physics I with Calculus	4	Pre or Coreq MATH 161	
PHYS 152	General Physics II	4	Official math placement or P/I	Soph
	<u>OR</u>			
PHYS 162	General Physics II with Calculus	4	Pre or Coreq MATH 161	

64-71 total hours

REMINDERS

1. Departmentally approved substitutes may be taken in place of certain labs.
2. CHEM 105-106 and labs do not count toward a major or minor in Chemistry.

^Satisfies advanced writing requirement

NAME: _____

B.S. Degree: Biochemistry Major (for students entering in Fall 2024/Spring 2025)

In the "WHAT" column, enter the specific course number when applicable--e.g. HIST 121. In the "WHEN" column, enter the term and year in which the requirement is satisfied--e.g., sp '20.

Liberal Arts Core	
WHAT	WHEN
_____	ENGL 101* w/ C (2.0) [3 hrs]
_____	ENGL 110 w/ C (2.0)* [3 hrs]
_____	COMM 211 w/ C (2.0) [3 hrs]
_____	Dept senior seminar/writing course
_____	Met by: _____ CHEM 497 [3 hrs]
_____	FYEX 101 [3 hrs]
_____	FYEX 102 [1 hr]
_____	FYEX 103/104/105/106/107 [1 hr]
_____	FYEX 103/104/105/106/107 [1 hr]
_____	FYEX 401 [1 hr]
_____	Foundational Scientific Inquiry [3-4 hrs]
_____	Foundational Quantitative Analysis [3-4 hrs]

No more than two lens courses may come from same departmental prefix and one lens must be taken at 300 level or above.

_____	_____	Ethical/Spiritual Explor Lens (ETSP) [3 hrs]
_____	_____	Aesthetic Expression Lens (AEXP) [3 hrs]
_____	_____	Per & Soc Well Being Lens (PSWB) [3 hrs]
_____	_____	Cultural Perspectives Lens (CEXP) [3 hrs]
_____	_____	Experimental Inquiry Lens (EXIN) [3 hrs]

37 – 39 Total semester hours

_____ 120 semester hours required for graduation

*Enter NA (not applicable) if waived upon admission

Biochemistry Major (B.S.)	
WHAT	WHEN
_____	BIOL 163 [4 hrs]
_____	BIOL 250 [4 hrs]
_____	BIOL 354 [4 hrs]
_____	BIOL 360/374/CHEM 363 [3-4 hrs]
_____	CHEM 161 [3 hrs]
_____	CHEM 163L [1 hr]
	OR
_____	CHEM 131 [3 hrs]
_____	CHEM 133L [1 hr]
_____	CHEM 132 [3 hrs]
_____	CHEM 134L [1 hr]
_____	CHEM 221 [3 hrs]
_____	CHEM 223L [1 hr]
_____	CHEM 222 [3 hrs]
_____	CHEM 224L [1 hr]
_____	CHEM 231 [3 hrs]
_____	CHEM 233L [1 hr]
_____	CHEM 301 [1 hr]
_____	CHEM 320 [3 hrs]
_____	CHEM 322L [1 hr]
_____	CHEM 340 [3 hrs]
_____	CHEM 350 [3 hrs]
_____	CHEM 351L [1 hr]
_____	CHEM 352 [3 hrs]
_____	CHEM 353L [1 hr]
_____	CHEM 397/399 [0-2 hrs]
_____	CHEM 497 [2 hrs]
_____	MATH 115 [3 hrs]
_____	MATH 161 [4 hrs]
_____	PHYS 151/161 [4 hrs]
_____	PHYS 152/162 [4 hrs]
_____	64-71 semester hours

>Departmentally approved substitutes may be taken in place of certain laboratories.

>Students enrolled in a course for which there is a lab must also enroll in the lab or its approved substitute, except with approval of the department.

>Except in specifically approved majors, a maximum of 52 hours in an academic discipline may count toward graduation. Three hours over the limit may count to accommodate an internship in the discipline.

>Only six hours of any minor may overlap with the required credit hours of a student's chosen major. The overlap constraint is not applicable to courses that majors or minors MUST take in others departments.