BIOCHEMISTRY AND MOLECULAR BIOLOGY: BIOTECHNOLOGY, BSAG

Requirements for Students Matriculating in or before Academic

Year 2024-2025. Learn more about University Academic Regulation 3.1 (http://catalog.okstate.edu/university-academic-regulations/#matriculation).

Minimum Overall Grade Point Average: 2.00

Total Hours: 120

Code	Title	Hours			
General Education Requirements					
English Composition					
See Academic Regulation 3.5 (http://catalog.okstate.edu/ university-academic-regulations/#english-composition/)					
ENGL 1113	Composition I	3			
or ENGL 1313	Critical Analysis and Writing I				
ENGL 1213	Composition II	3			
or ENGL 1413	Critical Analysis and Writing II				
American History & Go	overnment				
Select one of the foll	Select one of the following:				
HIST 1103	Survey of American History				
HIST 1483	American History to 1865 (H)				
HIST 1493	American History Since 1865 (DH)				
POLS 1113	American Government	3			
Analytical & Quantitat	ive Thought (A)				
MATH 1813	Preparation for Calculus (A)	3			
Humanities (H)					
Courses designated	(H)	6			
Natural Sciences (N)					
CHEM 1314	Chemistry I (LN)	4			
Select five hours of couses designated (N)					
Social & Behavioral Sciences (S)					
AGEC 1113	Introduction to Agricultural Economics (S)	3			
Additional General Education					
Courses designated	(A), (H), (N), or (S)	7			
Hours Subtotal		40			
Diversity (D) & Intern	ational Dimension (I)				
May be completed in any part of the degree plan					
Select at least one D	iversity (D) course				
Select at least one In	ternational Dimension (I) course				
College/Departmenta	al Requirements				
UNIV 1111	First Year Seminar (or other approved first year seminar course)	1			
From two of the following groups, select one course:					
Group 1					
PLNT 1213	Introduction to Plant and Soil Systems (N)				
HORT 1013	Principles of Horticultural Science (LN)				
NREM 1113	Elements of Forestry				
Group 2					

SOIL 1113 Land, Life and the Environment (N) SOIL 2124 Fundamentals of Soil Science (N) Group 3 ANSI 1023 Introduction to the Animal Sciences & ANSI 1021 and Introduction to the Animal Sciences Lab or ANSI 1124 Introduction to the Animal Sciences FDSC 1133 Fundamentals of Food Science ENTO 2993 Introduction to Entomology (LN) ENTO 3003 Livestock Entomology Group 4 NREM 1014 Introduction to Natural History (LN) NREM 3013 Applied Ecology and Conservation ENVR 1113 Elements of Environmental Science (N) BIOC 2344 Chemistry and Applications of Biomolecules BIOC 3713 Biochemistry I LA 1013 Introduction to Landscape Architecture Written and Oral Communication Select one of the following: 3 AGCM 3103 Written Communications in Agricultural Sciences and Natural Resources BCOM 3113 Written Communication ENGL 3323 Technical Writing 2 Select one of the following: 3 AGCM 3203 Oral Communications in Agricultural Sciences & Natural Resources (S) 3 SPCH 2713 Introduction to Speech Communication (S) 3 SPCH 3733 Elements of Persuasion	COU 1110		
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CHEM 3153 Organic Chemistry II 3	CHEM 3053	Organic Chemistry I	3
	CHEM 3112	Organic Chemistry Laboratory	2
	CHEM 3153	Organic Chemistry II	3
Select one of the following: 3	Select one of the follo	owing:	3
MATH 2123 Calculus for Technology Programs I (A)	MATH 2123	Calculus for Technology Programs I (A)	
STAT 2013 Elementary Statistics (A)	STAT 2013		
STAT 4013 Statistical Methods I (A)	01711 2010		
MICR 2123 Introduction to Microbiology 3		Statistical Methods I (A)	
MICR 2132 Introduction to Microbiology Laboratory 2	STAT 4013	• • •	3

PHYS 1114	College Physics I (LN)	4
or PHYS 2014	University Physics I (LN)	
BIOL 1113	Introductory Biology (N)	4
& BIOL 1111	and Introductory Biology Laboratory (LN)	
or BIOL 1114	Introductory Biology (LN)	
BIOL 1604	Animal Biology	4
or PBIO 1404	Plant Biology (LN)	3
Select one of the following:		
ANSI 3423	Animal Genetics	
BIOL 3023	General Genetics	
PLNT 3554	Plant Genetics and Biotechnology	
Related Courses		
	8 hours of BIOC or courses related to BIOC, proval, of the following:	8
BIOC 2202	Medicine and Molecules	
BIOC 3003	Hypothesis-Driven Undergraduate Research	
BIOC 4023	Molecular Biology and Stress Response of Plants	
BIOC 4213	Disease and Metabolism	
BIOC 3523	Biochemistry of Disease at the Cellular Level	
BIOC 4723	Introduction to Bioinformatics	
BIOC 3223	Physical Chemistry for Biologists	
or CHEM 3433	Physical Chemistry I	
BIOC 4883	Senior Seminar in Biochemistry	
BIOC 4990	Undergraduate Research ⁴	
MICR 3033	Cell and Molecular Biology	
PHYS 1214	College Physics II (LN)	
or PHYS 2114	University Physics II (LN)	
PLNT 4933	Gene Editing and Genetically Modified Crops	
Hours Subtotal		67
Electives		
Select 0 hours to con	nplete required total for degree	0
Hours Subtotal		0
Total Hours		120
		0

1

College & Departmental requirements that may be used to meet General Education requirements.

2

If ENGL 3323 Technical Writing is substituted for ENGL 1213 Composition above; hours in this block are reduced by 3.

3

If used as (S) course above, hours in this block are reduced by 3.

4

Total hours of BIOC 1990 Freshman Research in Biochemistry and Molecular Biology and BIOC 4990 Undergraduate Research may not exceed 10 hours.

Other Requirements

- A minimum of 40 semester credit hours and 100 grade points must be earned in courses numbered 3000 or above.
- · A 2.00 GPA or higher in upper-division hours.

Additional State/OSU Requirements

- At least: 60 hours at a four-year institution; 30 hours completed at OSU; 15 of the final 30 or 50% of the upper-division hours in the major field completed at OSU.
- Limit of: one-half of major course requirements as transfer work; onefourth of hours earned by correspondence; 8 transfer correspondence hours
- Students will be held responsible for degree requirements in effect at the time of matriculation and any changes that are made, so long as these changes do not result in semester credit hours being added or do not delay graduation.
- Degrees that follow this plan must be completed by the end of Summer 2030.