

COURSE REQUIREMENTS FOR BACHELOR OF SCIENCE IN BIOCHEMISTRY

1. THE GENERAL EDUCATION AND TOTAL UNIVERSITY CREDIT REQUIREMENTS MUST BE MET (NOTE: See General Education Goals for B.S. degree ISU Catalog). 128 total minimum credits are required for graduation. 36 of these must be upper division credits.

2. COURSES IN BIOLOGICAL SCIENCES: NUMBER OF CREDITS

BIOL 101	Biology I	4
BIOL 102	Biology II	4
BIOL 206	Cell Biology	4
BIOL 235	General Microbiology	4
BIOL 334	Experimental Biochemistry	1
BIOL g445	Biochemistry I	3
BIOL 447	Biochemistry II	3
BIOL 448	Advanced Experimental Biochemistry	2
BIOL 491	Seminar in Biochemistry	1

3. COURSES IN MATHEMATICS

MATH 170	Calculus I	4
MATH 175	Calculus II	4
MATH 153	Introduction to Statistics	3
MATH 275	Calculus III	4

(Additional courses in MATH are highly recommended for students planning to attend graduate school in biochemistry).

4. COURSES IN CHEMISTRY

CHEM 111	General Chemistry I	5
CHEM 112	General Chemistry II	4
CHEM 211	Inorganic Chemistry	3
CHEM 213	Inorganic Chemistry Lab I	1
CHEM 232	Quantitative Analysis	2
CHEM 234	Quantitative Analysis Lab	2
CHEM 301	Organic Chemistry I	3
CHEM 302	Organic Chemistry II	3
CHEM 303	Organic Chemistry I Lab	1
CHEM 304	Organic Chemistry II Lab	1
CHEM 341*	Topics in Physical Chemistry I	3
CHEM 342*	Topics in Physical Chemistry II	3
CHEM 491 or 492	Seminar	1

*May elect to take CHEM 351 and 352 instead of CHEM 341 and 342. (Additional courses in Chemistry are highly recommended for students planning to attend graduate school in biochemistry).

5. COURSES IN PHYSICS

PHYS 211	Engineering Physics I	4
PHYS 212	Engineering Physics II	4
PHYS 213	Engineering Physics I Lab	1
PHYS 214	Engineering Physics II Lab	1

6. ELECTIVE COURSES

Choose a minimum of 16 credits with at least 6 credits in Biological Sciences and 6 credits in Chemistry (advanced or experimental CHEM courses are acceptable).

BIOL 303	Principles of Animal Physiology	4
BIOL 358	Genetics	3
BIOL g411K	Molecular Biology Laboratory Methods	3

BIOL g434	Microbial Diversity	3
BIOL g451	Immunology	4
BIOL g465, g467	Microbial Genetics, and Laboratory	4
BIOL g473	Industrial Microbiology	4
BIOL g475	General Virology	3
BIOL g477 or g478	Bacterial or Animal Virology Lab	1
BIOL g481, g482	Independent Problems (max 2 credits)	2
BIOL g488	Advanced Radiobiology	3
CHEM 331, 334	Instrumental Analysis, and Lab	4
CHEM 365, 366	Synthetic Methods, and Lab	4
CHEM g407	Inorganic Chemistry II	2
CHEM g433, g437	Environmental Chemistry, and Lab	3
CHEM g453	Modern Experimental Physical Chemistry	3
CHEM g481, g482	Independent Problems (max 2 credits)	2
MATH 240	Linear Algebra	3
MATH 360	Differential Equations	3