

COURSE REQUIREMENTS FOR BACHELOR OF SCIENCE IN CLINICAL LABORATORY SCIENCE

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

B. COURSES IN BIOLOGICAL SCIENCES:	NUMBER OF CREDITS	
BIOL 101	Biology I	4
BIOL 102	Biology II	4
BIOL 221	Introductory Microbiology/Lab	4
or	or	
BIOL 235	General Microbiology	4
BIOL 301	Anatomy and Physiology I (or equivalent)	4
BIOL 302	Anatomy and Physiology II (or equivalent)	4
BIOL 451,451L	General Immunology and Lab	4
BIOL 491-492 or 494	Seminar	2
BIOL 206	Cell Biology	4
or	or	
BIOL 433	Microbial Physiology	4
BIOL 358	Genetics	3
or	or	
BIOL 465	Microbial Genetics	3
BIOL 305	Introduction to Pathobiology	3
or	or	
BIOL 463	Human Pathophysiology	4
BIOL 411 Series	Clinical Laboratory Sciences Courses	32
BIOL 411N	Clinical Experience (for board eligibility)	6

And at least two courses selected from the following areas:
Physics, Biophysics, Biometry, Statistics, Computer Science, Health Care Management, Epidemiology, Biochemistry, Analytical Chemistry, Instrumental Analysis, Nutritional Biochemistry, Advanced Biochemistry, Endocrinology, Histology, Developmental Biology, Advanced Microbiology, Advanced Genetics, Virology, Mycology, Parasitology, Molecular Biology

C. COURSES IN MATHEMATICS:

MATH 143	Precalculus	3
MATH 160	Brief Calculus	4
or	or	
MATH 253	Introduction to Statistics	4

D. COURSES IN CHEMISTRY:

CHEM 111	General Chemistry I	5
CHEM 112	General Chemistry II	4

And additional courses selected from the following areas for a total of 16 Chemistry credits: Organic, Biochemistry, Analytical

**RECOMMENDED COURSE SELECTION – CLINICAL LAB SCIENCE
Bachelor of Science**

It is the general policy of the Department of Biological Sciences that required courses not be waived and that course selection should follow the sequence listed for each major.

Fall Semester		Freshman Year		Spring Semester	
BIOL 101	Biology I	4 cr	BIOL 102	Biology II	4 cr
Math 143	College Algebra	3 cr	Math 253 or Math 160	Intro to Statistics Brief Calculus	3 cr
Eng 101	English Composition	3 cr	Eng 102	Critical Reading & Writing	3 cr
Goal 6,7,or 8		3 cr	Goal 6,7, or 8		3 cr
Goal 9,10,11,or 12		3 cr	COMM 101	Principles of Speech	3 cr
Total		16 cr	Total		16 cr

Fall Semester		Sophomore Year		Spring Semester	
Chem 111	General Chem I	5 cr	Chem 112	General Chem II	4 cr
BIOL 301	A&P I	4 cr	BIOL 221	Microbiology/Lab	4 cr
Goal 9,10,11, or 12		3 cr	BIOL 302	A&P II	4 cr
Electives		4 cr	Goal 9,10,11, or 12		3 cr
Total		16 cr	Electives		1 cr
			Total		16 cr

Fall Semester		Junior Year		Spring Semester	
BIOL 206	Cell Biology	4 cr	BIOL 305	Pathobiology	3 cr
BIOL 451/451L	Immunology/Lab	4 cr	BIOL 358	Genetics	3 cr
BIOL 411Q	Intro to CLS	2 cr	Chemistry/Electives		10 cr
Chemistry/Electives		6 cr	Total		16 cr
Total		16 cr			

Fall Semester		Senior Year		Spring Semester	
BIOL 491	Seminar	1 cr	BIOL 492	Seminar	1 cr
BIOL 411D	Clinical Micro I	3 cr	BIOL 411E	Clinical Micro II	3 cr
BIOL 411F	Clinical Hem I	3 cr	BIOL 411G	Critical Analysis	3 cr
BIOL 411J	Clinical Chem I	3 cr	BIOL 411I	Clinical Imm/Tran II	3 cr
BIOL 411K	Molecular Lab Methods	3 cr	BIOL 411P	Phleb/UA/Waived	2cr
BIOL 411V	Clinical Imm/Tran I	3 cr	BIOL 411M	Clinical Lab Research	1 cr
			BIOL 411S	Lab Management	3 cr
Total		16 cr	Total		16 cr

Summer Session		
BIOL 411N	Site Experience	1-6 cr

NOTE:

A total of 128 credits minimum is required for graduation. Award of a second BS in CLS requires 38 credits earned beyond the completion of the requirements for the first degree. Credits used for the second degree cannot be used to fulfill requirements for the first degree.

Students planning to attend other professional schools after completing the degree in CLS are strongly advised to check the requirements of those professional schools, particularly regarding requirements in Physics, Organic Chemistry, and course prerequisites. If a student meets all of the degree requirements with the exception of BIOL 411N (Clinical Experience) they may be awarded a BS degree in CLS, but will not be eligible to take the national registry or certification exam.