BIOLOGY, BACHELOR OF SCIENCE WITH A CONCENTRATION IN EDUCATION

To obtain a BS with a major in Biology with a concentration in Education, a student must fulfill university, College of Arts & Sciences, College of Education, Health and Human Sciences, and departmental requirements.

Bachelor of Science in Biology with a Concentration in Education Requirements

C	ode	- Title	Credits
G	ENERAL EDUCATIO	ON REQUIREMENTS - 34 Hours	
R	equired		
М	inimum of "C-"requi	red	
Fu	undamental Skills 15		
	Writing – 6 hrs.		
	ENGL 1150	ENGLISH COMPOSITION I	
	ENGL 1160	COLLEGE RESEARCH AND INFORMATION LITERACY	
	Oral Communica	tion – 3 hrs.	
	CMST 1110	PUBLIC SPEAKING FUNDS	
	or CMST 2120	ARGUMENTATION AND DEBATE	
	Quantitative Lite	racy – 3 hrs.	
	MATH 1120	INTRODUCTION TO MATHEMATICAL AND COMPUTATIONAL THINKING	
	or MATH 1130	QUANTITATIVE LITERACY	
	or MATH 1140	QUANTITATIVE REASONING FOR HEALTHCA PROFESSIONALS	RE
	or MATH 1300	COLLEGE ALGEBRA WITH SUPPORT	
	Data Literacy – 3	hrs.	
	Select one from the following:		
	STAT 1100	DATA LITERACY AND VISUALIZATION	
	STAT 1530	ELEMENTARY STATISTICS	
	Until Fall 2028, students can satisfy this requirement with an approved data literacy course, or any approved natural or social science general education course.		
B	readth of Knowled	lge	13
	Social Science - 3	ırs.	
	Humanities – 3 hrs		
	Natural & Physical Science (must complete a lab) – 4 hrs.		
	Arts – 3 hrs.		
In	dividual and Soci	al Responsibility	6
	Cultural Knowledge	e – 3 hrs.	
	Civic Knowledge ar	nd Engagement – 3 hrs.	
M	AJOR REQUIREM	ENTS	
A Ec Bi le	Bachelor of Science lucation requires a r ology. At least 18 Bi vel.	in Biology with a Concentration in ninimum of 37 credits of coursework in ology credits must be at the 3000 or 4000	
A ar	A minimum of 42 credits in the College of Education, Health, and Human Sciences are required for the Concentration and		

state aligned certification requirements.

^Course requires pre-i	requisite(s)	
Biology Major		
Required Biology C	oursework - 37-38 Hours Required	
All of the following:		34
BIOL 1450	BIOLOGY I (** ^)	
BIOL 1750	BIOLOGY II (^)	
BIOL 2140	GENETICS (^)	
BIOL 2740	HUMAN ANATOMY AND PHYSIOLOGY I (^)	
BIOL 3020	MOLECULAR BIOLOGY OF THE CELL (^)	
BIOL 3240	INTRODUCTION TO IMMUNOLOGY (^)	
BIOL 3340	ECOLOGY (^)	
BIOL 3830	BIOLOGY OF PATHOGENIC MICROORGANISMS (^)	
BIOL 4230	EVOLUTION (^)	
Additional Biology	Coursework	3-4
Students must take at associated laboratory obtain at least 3 credi Biology core requirem	least one course, together with the , from one of the following groups to ts of advanced study beyond the above ents.	
Group I - Cellular ar	nd Molecular Biology	
BIOL 4130	MOLECULAR GENETICS (^)	
BIOL 4140	CELLULAR BIOLOGY (^)	
BIOL 4450	VIROLOGY	
& BIOL 4454		
BIOL 4640 & BIOL 4644	MOLECULAR MICROBIOLOGY and MOLECULAR MICROBIOLOGY LAB (^)	
BIOL/CHEM 4650	BIOCHEMISTRY I (^ with following lab)	
BIOL/CHEM 4654	BIOCHEMISTRY I LABORATORY (^)	
BIOL/CHEM 4660	BIOCHEMISTRY II (^ with following lab)	
BIOL/CHEM 4664	BIOCHEMISTRY II LABORATORY (^)	
BIOL 4810	BEHAVIORAL GENETICS (^)	
Group II - Structure Systems	and Function of Multicellular	
BIOL 4440	PLANT PHYSIOLOGY (^)	
BIOL 4460	COMPARATIVE IMMUNOLOGY (^)	
BIOL 4850	DEVELOPMENTAL BIOLOGY	
& BIOL 4830	and DEVELOPMENTAL GENETICS (^)	
Group III - Biodivers	sity	
BIOL 3100 & BIOL 3104	PALEONTOLOGY and INVERTEBRATE PALEONTOLOGY LABORATORY (^)	
BIOL 3530	FLORA OF THE GREAT PLAINS (^)	
BIOL 3730	FAUNA OF THE GREAT PLAINS (^)	
BIOL 4780	VERTEBRATE ZOOLOGY (^)	
BIOL 4790	MAMMALOGY (^)	
BIOL 4840	HERPETOLOGY (^)	
BIOL 4940	ENTOMOLOGY	
BIOL 4980	ORNITHOLOGY (^)	
Group IV - Ecology,	Evolution, and Conservation Biology	
BIOL 4180	FRESHWATER ECOLOGY (^)	
BIOL 4220	POPULATION BIOLOGY (^)	
BIOL 4240 & BIOL 4250	MARINE BIOLOGY and FIELD MARINE BIOLOGY (^)	
BIOL 4410	WETLAND ECOLOGY AND MANAGEMENT (^)	

Required Cognate Chemistry Coursework

	CHEM 1140 & CHEM 1144	FUNDAMENTALS OF COLLEGE CHEMISTRY and FUNDAMENTALS OF COLLEGE		
	CHEM 2210 & CHEM 2214	CHEMISTRY LABORATORY (** ^) FUNDAMENTALS OF ORGANIC CHEMISTRY and FUNDAMENTALS OF ORGANIC CHEMISTRY LABORATORY (^)		
	CHEM 3650 & CHEM 3654	FUNDAMENTALS OF BIOCHEMISTRY and FUNDAMENTALS OF BIOCHEMISTRY LABORATORY (^)		
R	equired Cognate F	Physics Coursework	5	
	PHYS 1110 & PHYS 1154	PHYSICS FOR LIFE SCIENCE I and GENERAL PHYSICS LABORATORY I (** ^)		
0	ther Required Cog	jnate Coursework	10	
	MATH 1300	COLLEGE ALGEBRA WITH SUPPORT (**)		
	STAT 1530	ELEMENTARY STATISTICS (** ^)		
	GEOL 1170	INTRODUCTION TO PHYSICAL GEOLOGY (**)		
S	elect all of the foll	owing Educator Preparation	39	
P	rogram Requirem			
	TED 2100	EDUCATIONAL FOUNDATIONS (^)		
	TED 2200	HUMAN RELATIONS FOR BIAS-FREE CLASSROOMS (**^)		
	or TED 2060	EQUITY, LANGUAGE, AND CULTURAL LITERACY	(
	TED 2380	DEVELOPMENT AND LEARNING IN ADOLESCENCE (^)		
	TED 2400	PLANNING FOR EFFECTIVE TEACHING (^)		
	TED 3550	SECONDARY CLASSROOM MANAGEMENT (^)		
	TED 3690	LITERACY AND LEARNING (^)		
	SPED 3800	DIFFERENTIATION AND INCLUSIVE PRACTICES (^)		
	TED 4000	SPECIAL METHODS IN THE CONTENT AREA (^)		
	TED 4600	CLINICAL PRACTICE AND SEMINAR: ELEMENTARY OR SECONDARY LEVEL (^)		
M Ec (a	ust pass Praxis I Con lucator Preparation t completion of endo	re Exam for formal acceptance to Program; Praxis II Content test required orsement)		
Co re	ollege of Arts and equirement satisfi	Sciences' college breadth ed by this major		
B	achel <mark>or S</mark> cience C	ognate Requirement	0-15	
Se	e advisor			
E	LECTIVES			
El	Elective hours as required to reach a total of 120 hours			

Bachelor of Science in Biology with a Concentration in Education Four-Year Plan

Freshman		
Fall		Credits
ENGL 1150	ENGLISH COMPOSITION I	3
MATH 1120 or MATH 1130 or MATH 1140 or MATH 1300	INTRODUCTION TO MATHEMATICAL AND COMPUTATIONAL THINKING or QUANTITATIVE LITERACY or QUANTITATIVE REASONING FOR HEALTHCARE PROFESSIONALS or COLLEGE ALGEBRA WITH SUPPORT	3-4
BIOL 1450	BIOLOGY I	5
General Education C	ourse or Elective	3
Attend Durango D Handshake accou assessment. Atter Fair to explore stu appointment for s develop your Path	Days; other campus events. Set up a nt and take the Pathway U career ad the Student Involvement & Volunteer dent organizations. Make advising pring: Sept-Oct. Work with your advisor to way in Stellic.	
	Credits	14-15
Spring		
ENGL 1160	COLLEGE RESEARCH AND INFORMATION LITERACY	3
CMST 1110 or CMST 2120	PUBLIC SPEAKING FUNDS or ARGUMENTATION AND DEBATE	3
BIOL 1750	BIOLOGY II	5
General Education C	ourse or Elective	3
General Education C	ourse or Elective	3
Recommended: Be Skills	egin studying for Praxis CORE Academic	
Attend campus ev an idea of interest review with UNO and ask about un advising appointn March.		
	Credits	17
Summer		
PHYS 1110 & PHYS 1154	PHYSICS FOR LIFE SCIENCE I and GENERAL PHYSICS LABORATORY I	5
	Credits	5
Sophomore Fall		
TED 2100	EDUCATIONAL FOUNDATIONS	3
TED 2200 or TED 2060	HUMAN RELATIONS FOR BIAS-FREE CLASSROOMS or EQUITY, LANGUAGE, AND CULTURAL LITERACY	3
CHEM 1140 & CHEM 1144	FUNDAMENTALS OF COLLEGE CHEMISTRY and FUNDAMENTALS OF COLLEGE CHEMISTRY LABORATORY (*)	5
BIOL 2740	HUMAN ANATOMY AND PHYSIOLOGY I	4

Required: Apply for Educator Preparation Program at this time.

Attend the Career & Internship Fair to start networking with employers. Look for volunteer, research, or part-time work to gain experience. Join a student organization or club related to your field or interests. Make advising appointment for spring: Sept. - Oct.

	Credits	15
Spring		
BIOL 2140	GENETICS	4
CHEM 2210 & CHEM 2214	FUNDAMENTALS OF ORGANIC CHEMISTRY	5
	CHEMISTRY LABORATORY (*)	
GEOL 1170	INTRODUCTION TO PHYSICAL GEOLOGY	4
*CHEM: Please refe Chemistry options.	r to your advisor or the catalog for other	
Recommended but Academic Skills.	not required: Pass the Praxis CORE	
Attend a career fair	Attend a career fair for informational and networking	
purposes. Update your resume and LinkedIn profile with new experiences. Investigate and apply for summer internships, research, or study abroad programs. Make advising		
appointment for su	mmer and fall: February – March.	
Summer	Credits	13
STAT 1530	ELEMENTARY STATISTICS (*)	3
BIOL 3020	MOLECULAR BIOLOGY OF THE CELL	3
	Credits	6
Junior Fall		
TED 2380	DEVELOPMENT AND LEARNING IN	3
120 2000	ADOLESCENCE (*)	5
TED 2400	PLANNING FOR EFFECTIVE TEACHING (*)	6
BIOL 4230	EVOLUTION	3
General Education Co	urse or Elective	3
*TED 2400 and 238 Morning or Afterno	0 must be taken back-to-back, in either a on block.	
Required: Pass Praxis CORE Academic Skills by the end of this semester.		
Apply for a paid internship or research assistantship. Attend		
a mock interview workshop or use online interview tools with		
programs or profes	sional schools. Visit Career Center.	
continue updating resume. Make advising appointment for spring: Sept-Oct.		
Required: Acceptan Must have 2.75 GP/	ce into Educator Preparation Program. A.	
	Credits	15
Spring		
TED 3550	SECONDARY CLASSROOM MANAGEMENT (*)	3
TED 3690	LITERACY AND LEARNING (*)	3
BIOL 3830	BIOLOGY OF PATHOGENIC MICROORGANISMS	3
BIOL 3240	INTRODUCTION TO IMMUNOLOGY	3
CHEM 3650	FUNDAMENTALS OF BIOCHEMISTRY	4
& CHEM 3654	and FUNDAMENTALS OF BIOCHEMISTRY LABORATORY	
*TED 3550 and TED 36 a Morning or Afternoo	90 must be taken back-to-back, in either on block.	

Request letters of recommendation from faculty for jobs or grad school. Attend the All-Majors Career Fair with a plan to network. Meet with your advisor or submit for a graduation check-in to review remaining degree requirements. Make advising appointment for summer and fall: February – March.

	Credits	16
Summer		
BIOL 3340	ECOLOGY (*)	4
General Educatio	on Course or Elective	3
	Credits	7
Senior		
Fall		
TED 4000	SPECIAL METHODS IN THE CONTENT AREA (*)	3
SPED 3800	DIFFERENTIATION AND INCLUSIVE PRACTICES (*)	3
Advanced Theme	es Biology course w/lab	3-4
General Educatio	on Course or Elective	3
*SPED 3800: N TED 3550	*SPED 3800: Must be taken concurrently with TED 4000 or TED 3550	
Recommende	Recommended but not required: Pass Praxis II.	
Check in with graduate scho a career fair o for interviews Make advising	Check in with Career Center for networking tips. Finalize graduate school applications or job search strategy. Attend a career fair and start applying for full-time jobs. Prepare for interviews and salary negotiations with Career Services. Make advising appointment for spring: Sept Oct.	
	Credits	12-13
Spring		
TED 4600	CLINICAL PRACTICE AND SEMINAR: ELEMENTARY OR SECONDARY LEVEL (*)	12
*Candidates r cumulative GF Reading, and	nust complete all course work, have a minimum PA of 2.75, passing Praxis Core scores (Math, Writing), and be accepted into Clinical Practice.	
Request letter grad school. A network. Mee check-in to rev advising appo March.	s of recommendation from faculty for jobs or Attend the All-Majors Career Fair with a plan to t with your advisor or submit for a graduation view remaining degree requirements. Make wintment for summer and fall: February –	
	Credits	12
	Total Credits	132-134

This roadmap is a suggested plan of study and does not replace meeting with an advisor. Please note that students may need to adjust the actual sequence of courses based on course availability. Please consult an advisor in your major program for further guidance.

This plan is not a contract and curriculum is subject to change

GPA Requirements: Cumulative 2.5 GPA for Educator Preparation Program initial acceptance, cumulative 2.75 GPA for formal admission and graduation.

Graduation Requirements: Students must have a cumulative GPA of at least 2.75, no grade lower than "C" in required courses, and no incomplete in required courses to be recommended for graduation.

Additional Information About this Plan:

University Degree Requirements: An undergraduate degree from UNO requires a minimum 120 credit hours, and completion of 30 credit hours per year, on average, is needed to finish in four years. Please review the requirements specific to your program.

Placement Exams: For Math, English, and World Language, a placement exam may be required. More information on these exams can be found at https://www.unomaha.edu/enrollment-management/testing-center/ placement-exams/information.php

**Transfer credit or placement exam scores may change suggested plan of study