

## Biology: Teacher Preparation 4-Year Pathway 2022-2023

Fall Freshman Courses (14 units total)	Course or GE Title	Units	GE/Major
FYS 148	Schooling in public imagination	3	C2, FYS
MATH 130 (w MATH 30 if needed)	Precalculus (w co-req support course)	5	B4
HCOM 120 or 125, or (CAD 102 + 90)	Critical Reading and Writing	3	A2
CHEM 109	Introductory Chemistry	3	B1
Spring Freshman Courses (15 units total)	Course or GE Title	Units	GE/Major
HCOM 110	Fundamentals of Speaking & Listening	3	A1
MATH 150	Calculus I	4	B4, major
CHEM 110 +CHEM 110L	General Chemistry I & Chem 1 Lab	4+1	B1, B3, major
Any C1 GE course	Arts General Education course	3	C1
Fall Sophomore Courses (15 units total)	Course or GE Title	Units	GE/Major
HCOM200, HCOM202, BIO131 or ENSTU130	Critical Thinking GE	3	A3
CHEM 111 & CHEM 111L	General Chemistry II & Chem II Lab	4+1	Major
PHYS 220	Physics I with Lab	4	Major
HCOM 243, SBS 249	US History with GE area F	3	F, US1
Spring Sophomore Courses (16 units total)	Course or GE Title	Units	GE/Major
BIO 210 & BIO 210L	Cell & Molec Bio & Animal Physio& Lab	4+1	B2, B3, Major
CHEM 211 & CHEM 211L	Organic Chemistry I & O-Chem 1 lab	3+2	Major
SL210S or ED212S	Civics/Service Learning GE course	3	DCSL, US2&3
HDFS 200, KIN 161, KIN 263, PSY 210	Area E Lifelong Lrng &Self-Develop	3	E
Fall Junior Courses (16 units total)	Course or GE Title	Units	GE/Major
BIO 211 & BIO 211L (211D optional)	Ecology, Evolu, Biodiv & Plants & lab	4+1	Major
STAT 250	Applied Stats for Science & Tech	4	Major
PHYS 221	Physics II	4	Conc
Social Science GE course	Lower-division DGSS course	3	DGSS
Spring Junior Courses (16 units total)	Course or GE Title	Units	GE/Major
BIO 340	Ecology	4	UDB, conc
BIO 320	Microbiology	4	Conc
BIO 301	Research & Technical Writing in Biology	2	GWAR, Core
GEOL 210	Introduction to Earth Science	3	Conc
SPAN 340 or 350 or JAPN 340 or 350	UD C with World Culture & languages	3	UDC, WCL
Fall Senior Courses (15 units total)	Course or GE Title	Units	GE/Major
BIO 330	Vertebrate Physiology	3	UDB, Major
BIO 341	Evolutionary Biol & Population Genetics	3	Conc
BIO 379S	Biology Service Learning	3	UDSL, Conc
MSCI 337 or ENVS 307	Robotics-Ecol Rsch or Energy/Climate	3	conc
Teacher Prep elective (see catalog)	Teacher Prep Concentration Elective	3	Conc
Spring Senior Courses (14 units total)	Course or GE Title	Units	GE/Major
BIO311	Genetics	4	UDB, Major
BIO 493+494 or BIO 421+492 or BIO 430+MSCI 410	Biology Education Capstone	4	Conc
Any upper-division Social Sciences	UD Social Sciences	3	UDD
Additional C1 or C2 course	Lower-division Arts or Humanities course	3	C1 or C2
<b>Total BIO Teacher Prep 4-yr pathway:</b>		<b>121</b>	