

## Biology: Molecular Biology 4-Year Pathway 2022-2023

Fall Freshman Courses (14 units total)	Course or GE Title	Units	GE/Major
FYS 191	Comparative Ethnic Experiences	3	F, FYS
<b>MATH 130 (w MATH 30 if needed)</b>	Precalculus (w co-req support course)	5	B4
HCOM 120 or 125, CAD 101B 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 and Listen	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 (or BIO 210 & 210L)	Physics I with Lab	4	Major
US History with or GE area C2 or F (GE area C2) SBS 114 or (GE area F): HCOM 243 or SBS 249	US History course with GE area C2 or F	3	US History US1 with C2 or F
Spring Sophomore Courses (16 units total)	Course or GE Title	Units	GE/Major
BIO 210 & BIO 210L (or PHYS 220) Whichever not taken previously	Cell & Molec Bio & Animal Physio& Lab	4+1	B2, B3, Major
CHEM 211 & CHEM 211L	Organic Chemistry I & OCHEM 1 lab	3+2	Major
SL210S, ED212S, GS280S, HCOM260S, SBS212S	Civics/Service Learning GE course	3	DCSL, US2&3
HDFS 200, KIN 161, KIN 263, PSY 210	Area E Lifelong Lrng &Self-Devel	3	E
Fall Junior Courses (15 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
Additional C1 or C2 course (f needed)	Lower-division Arts or Humanities	3	C1 or C2
PSY 100 or other Social Science GE course	Lower-division DGSS course if	3	DGSS
Spring Junior Courses (16 units total)	Course or GE Title	Units	GE/Major
BIO 311	Genetics	4	UDB, core
CHEM 310	Biochemistry I	3	Conc
BIO 320 or BIO 322	Microbiology or Plant Pathology	4	Rsch meth
BIO 301	Research & Technical Writing in Biology	2	GWAR, Core
SPAN 340 or 350 or JAPN 340 or 350	UD C with World Culture & languages	3	UDC, WCL
Fall Senior Courses (14 units total)	Course or GE Title	Units	GE/Major
BIO 330 or BIO 332 or BIO 341 or BIO 370	Physiology or Evolutionary Biol course	3	Conc
BIO 378S or BIO 379S	Health Sci Svc Lrn or Biology Svc Learn	3	UDSL, Major
BIO 320 or 322 or 344L or 380 or 425 or 430 or 444 or 461 or CHEM 310L or CHEM 350	Additional BIO Research Methods	4	2 <sup>nd</sup> Rsch meth
BIO 421 + BIO 492 or other Integ Learning	Integrative Learning/Capstone	4	Conc
Spring Senior Courses (15 units total)	Course or GE Title	Units	GE/Major
BIO 320, 322, 33, 341, 341L, 344L, 370, 380,410,412, 413,414,421,430,444,461,or CHEM 350, CHEM 410, or MSC1 331	Additional Molec Biol core course not counted previously for other requirement	4	Conc
Group A Elective (or course for minor)	Major elective from Group A	4	Group A elect
Group A Elective (or course for minor)	Major elective from Group A	3	Group A elec
Group B elective (or course for minor)	Major elective from Group B	1	Grp A or B elec
Any upper-division Social Sciences UDD	UD Social Sciences	3	UDD
<b>Total BIO Molec Biol 4-yr pathway:</b>		<b>120</b>	