

Bachelor of Science, Biology: Molecular Biology Concentration (MBO): 2023-2024 Catalog

Course No.	Description	Cr.
First Year		
Fall		
<input type="checkbox"/> BIOL 110	Evolution, Ecol, & Plant Biol.	4
<input type="checkbox"/> CHEM 121	Chemistry Principles I	4
<input type="checkbox"/> MATH 121	Calculus/Geom I	3
<input type="checkbox"/> WRIT 102	Research Writing	3
<input type="checkbox"/> HIST xxx	History Elective 100-200 level	3
<input type="checkbox"/> CORE 103	Fall Comm. Enrich. Series	0
<input type="checkbox"/> BIOL 131	Biology First Year Seminar	0
Total Credits		17

Course No.	Description	Cr.
Second Year		
Fall		
<input type="checkbox"/> BIOL 302	General Microbiology	4
<input type="checkbox"/> CHEM 221	Organic Chemistry I	4
<input type="checkbox"/> LIT 104, 201, 202, 204, 207, 270	Literature	3
<input type="checkbox"/> PHIL 205	Discovering Philosophy	3
<input type="checkbox"/> SOC SCI	Social Science Elective II	3
Total Credits		17

Course No.	Description	Cr.
Third Year		
Fall		
<input type="checkbox"/> BIOL 405	Biochemistry w/ lab	4
<input type="checkbox"/> PHYS 104	Intro to Physics I	4
	or 121 Gen. Physics I	
<input type="checkbox"/> LANG xxx	Foreign Lang. (102 or higher)	3
<input type="checkbox"/> ECON/PLSC/PSYC/SOC	Social Science III	3
<input type="checkbox"/>	Free Elective	3
<input type="checkbox"/> BIOL 331	Biology Junior Seminar	0
<input type="checkbox"/> EXAM 301	Writing Competency	0
Total Credits		17

Course No.	Description	Cr.
Fourth Year		
Fall		
<input type="checkbox"/> BIOL xxx	Biology Cluster Course	3-4
<input type="checkbox"/> BIOL/CHEM/ CPSC/NEUR	Molecular Biology Elective	3-4
<input type="checkbox"/>	Free Elective	3
<input type="checkbox"/>	Free Elective	3
<input type="checkbox"/>	Free Elective	2
Total Credits		14-16

Total Required Credits: 128

Revised 5/2023

Course No.	Description	Cr.
First Year		
Spring		
<input type="checkbox"/> BIOL 111	Molecules, Cells, & Anim. Phys.	4
<input type="checkbox"/> CHEM 122	Chemistry Principles II	4
<input type="checkbox"/> SOC SCI	Social Science Elective I	3
<input type="checkbox"/> FTAE 105	Franciscan Goals for Today	3
<input type="checkbox"/> CORE 113	Gen Ed 1 st Year Seminar	3
<input type="checkbox"/> CORE 104	Spring Comm. Enrich. Series	0
Total Credits		17

Course No.	Description	Cr.
Second Year		
Spring		
<input type="checkbox"/> BIOL 301	Genetics	4
<input type="checkbox"/> CHEM 222	Organic Chemistry II	4
<input type="checkbox"/>	Mathematics Elective (see note)	3-4
<input type="checkbox"/> FNAR xxx	Fine Arts Elective	3
<input type="checkbox"/>	Diversity Elective	3
<input type="checkbox"/> BIOL 231	Biology Sophomore Seminar	0
Total Credits		17-18

Course No.	Description	Cr.
Third Year		
Spring		
<input type="checkbox"/> BIOL 401	Cell & Molecular Biology	4
<input type="checkbox"/> BIOL xxx	Biology Cluster Course	3-4
<input type="checkbox"/> PHYS 105	Intro to Physics II	4
	or 122 Gen. Physics II	
<input type="checkbox"/> PHIL /FTAE	300+ Phil/FTAE Elective	3
<input type="checkbox"/>	Free Elective	3
Total Credits		17-18

Course No.	Description	Cr.
Fourth Year		
Spring		
<input type="checkbox"/> BIOL 402	Evolution	3
<input type="checkbox"/> BIOL 431	Biology Senior Seminar	1
<input type="checkbox"/> BIOL 430	Adv. Molecular Methods	2
<input type="checkbox"/>	Free Elective	3
<input type="checkbox"/> CORE 407	Keystone Seminar	3
<input type="checkbox"/> EXAM 401	Dept. Comp. Exam	0
Total Credits		12

***Sequence of courses may be altered with consent of advisor.

Biology Clusters

F = Fall; S = Spring; Su = Summer; AN = As Needed

At least 1 course is required from each cluster.

Ecology Cluster

- BIOL 203 – Ecology (F)
- BIOL 208 – Animal Behavior (F)
- BIOL 220 – Conservation Biology (S)
- BIOL 322 – Field Biology (S)
- BIOL 326 – Freshwater Aquatic Biology (F)

Organismal Biology Cluster

- BIOL 204 – Invertebrate Zoology (F)
- BIOL 211 – Comparative Anatomy (S)
- BIOL 212 – Developmental Biology (S)
- BIOL 218 – Marine Biology (F)
- BIOL 306 – Animal Nutrition (F)
- BIOL 320 – Vertebrate Zoology (S)
- BIOL 345 - Environmental Animal Physiology (S)
- BIOL 403 – Advanced Botany (F)
- BIOL 406 – Vertebrate Physiology (F)

Molecular Biology Electives

- BIOL 212 – Developmental Bio. (if not taken above)
- BIOL 251 - Bioinformatics (AN)
- BIOL 305 – Immunology (F)
- BIOL 398-399 – Biology Internship
- BIOL x54 Special Topic. Biol. (with approval)
- BIOL x94 Biological Research
- NEUR 279 – Introduction to Neuroscience (S)
- CPSC 121 – Introduction to Programming
- CPSC 122 – Intermediate Programming
- CPSC 250 – Bioinformatics Programming
- CHEM 321 – Physical Chemistry I
- CHEM 322 – Physical Chemistry II
- CHEM 404 – Advanced Organic Chemistry

Mathematics Elective

- BIOL 315 – Biostatistics (S)
- MATH 130 – Discrete Mathematics (S)
- MATH 215 – Introductory Statistics (F,S)
- STAT 205 – Essentials of Statistics (F,S)

Consider undergraduate research

Upper-level CHEM classes may req. MATH 122.