

Bachelor of Science, Biology: Molecular Biology Concentration (MBO): 2020-2021 Catalog

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

Second Year		
Fall		
□ BIOL 302	General Microbiology	4
□ CHEM 221	Organic Chemistry I	4
□ LIT 104, 201, 202, 204, 207, 270	Literature	3
□ PHIL 205	Discovering Philosophy	3
□ SOC SCI	Social Science Elective II	3
Total Credits		17

Third Year		
Fall		
□ BIOL 405	Biochemistry	4
□ PHYS 104	Intro to Physics I	4
or 121	Gen. Physics I	
□ LANG xxx	Foreign Lang. (102 or higher)	3
□ ECON/PLSC/PSYC/SOC	Social Science III	3
□	Free Elective	3
□ BIOL 331	Biology Junior Seminar	0
□ EXAM 301	Writing Competency	0
Total Credits		17

Fourth Year		
Fall		
□ BIOL xxx	Biology Cluster Course	3-4
□ BIOL/CHEM/ CPSC/NEUR	Molecular Biology Elective	3-4
□	Free Elective	3
□	Free Elective	3
□	Free Elective	2
Total Credits		14-16

Total Required Credits: 128

Revised 5/20

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

Second Year		
Spring		
□ BIOL 301	Genetics (Diversity req)	4
□ CHEM 222	Organic Chemistry II	4
□	Mathematics Elective (see note)	3-4
□ FNAR xxx	Fine Arts Elective	3
□	Free Elective	3
□ BIOL 231	Biology Sophomore Seminar	0
Total Credits		17-18

Third Year		
Spring		
□ BIOL 401	Cell & Molecular Biology	4
□ BIOL xxx	Biology Cluster Course	3-4
□ PHYS 105	Intro to Physics II	4
or 122	Gen. Physics II	
□ PHIL/RLST	300+ Phil/RLST Elective	3
□	Free Elective	3
Total Credits		17-18

Fourth Year		
Spring		
□ BIOL 402	Evolution	3
□ BIOL 431	Biology Senior Seminar	1
□ BIOL 430	Adv. Molecular Methods	2
□	Free Elective	3
□ CORE 407	Keystone Seminar	3
□ 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 (S)
 BIOL 208 – Animal Behavior (F)
 BIOL 220 – Conservation Biology (S)
 BIOL 320 – Vertebrate Zoology (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 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

If pursuing graduate school, prep for entrance exams during summer after junior year.

Upper-level CHEM classes may req. MATH 122.