

B.S. Bioinformatics (Molecular & Cellular Biology Track)

Catalog Year 2019-2020

NAME _____ SID _____ Date _____

GENERAL EDUCATION COURSES:

i. Freshman Composition *(Complete one sequence.)*

ENGL 101 (3) _____ ENGL 102 (3) _____ or
 (ENGL 106*) _____
 ENGL 107 (3) _____ ENGL 108 (3) _____ or
 ENGL 109H (3) _____ MCWA _____

ii. Mathematics: Satisfied by math foundation courses.

iii. Second Language *(Second Semester Proficiency)*

TIER ONE COURSES:

i. Individuals and Societies 150 *(6 units)*

ii. Traditions and Cultures 160 *(6 units)*

TIER TWO COURSES:

i. Arts *(3 units)*

ii. Humanities *(3 units)*

iii. Individuals and Societies *(3 units)*

iv. Diversity Emphasis Requirement: *One course must meet this requirement. It can be double-dipped with any Tier One or Tier Two course.*

Note: Courses offered only in the fall, spring, or summer semesters are labeled with F, S, or SS.

**Some students may be required to take ENGL 106 prior to taking ENGL 107. If not, ENGL 107 and ENGL 108 will complete foundation composition requirements.*

FOUNDATION COURSES (38-40 units):

General Chemistry

CHEM 151 (4) _____ CHEM 152 (4) _____
 or
 CHEM 141 & 143 (4) _____ CHEM 142 & 144 (4) _____

Organic Chemistry

CHEM 241A & 243A (4) _____
 CHEM 241B & 243B (4) _____

Biology

ECOL 182 R & L (4) _____
 MCB 181R & L (4) _____

Mathematics

MATH 122A/B (5) or MATH 125 (3) _____
 MATH 129 (3) _____

Computer Science

CSC 110 or ISTA 130 (4) _____
 CSC 120 (4) _____

BIOINFORMATICS MAJOR CORE COURSES (18 units):

ECOL 296B (F; 1) _____ CSC 250 (S; 3) _____
 CSC 345 (4) _____ ECOL 346 (S; 4) _____
 CSC 245 or MATH 243 (3) _____
 MATH 263 (3) or ECOL 379 (3; S) _____

MOLECULAR & CELLULAR BIOLOGY FOCUS (26-27 units):

MCB 305 (4; S) _____ MCB 315 (4; F) _____
 MCB 304 (4; F) or ECOL 320 (4; F) _____
 BIOC 384 (3) _____ or MCB 301 (4) _____

Electives *(At least 11 units of upper division Bioinformatics electives are required.)*

_____ ()
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Academic Plan for a B.S. in Bioinformatics (Molecular & Cellular Biology Track)

SEMESTER 1	Units
CHEM 151 or 141 + 143	4
MATH 122A/B or MATH 125	3 – 5
ENGL 101	3
Tier 1	3
ECOL 296B	1
TOTALS	14 - 16

SEMESTER 2	Units
CHEM 152 or 142 + 144	4
CSC 110 or ISTA 130	4
MATH 129	3
ENGL 102	3
Tier 1	3
TOTALS	17

SEMESTER 3	Units
CHEM 241A + 243A	4
MCB 181R + 181L	4
MATH 263 (or ECOL 379 in Spring)	3
CSC 120	4
TOTALS	15

SEMESTER 4	Units
CHEM 241B + 243B	4
ECOL 182R + 182L	4
CSC 245 or MATH 243	4
BIOC 384 or MCB 301	3
TOTALS	15

SEMESTER 5**	Units
Tier 1	3
CSC 250	4
CSC 345	4
MCB 304 (or ECOL 320)	4
MCB 315 (or Senior year, if odd year)	
TOTALS	14

SEMESTER 6	Units
MCB 305	4
ECOL 346	4
Major Elective	4
Tier 1	3
TOTALS	15

SEMESTER 7	Units
ECOL 302	4
Second Language	4 – 5
MCB 315 (Even years only)	3
Tier 2	3
TOTALS	16 – 17

SEMESTER 8	Units
Major Elective	3 – 4
Major Elective	4
Tier 2	6
Second Language	4 – 5
TOTALS	18 – 19

TOTAL UNITS NEEDED: 120 UPPER DIVISION UNITS NEEDED: 42

Please note that this checklist indicates BIOINBS: MCB requirements. Additional coursework not listed on this page is required in order to graduate.