

B.S. Bioinformatics (Systems 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 or spring semesters are labeled with F or S.

**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 (3) or MATH 243 (3) _____

MATH 263 (3) or ECOL 379 (3; S) _____

SYSTEMS BIOLOGY FOCUS (26-27 units):

ECOL 302 (4; F) _____ ECOL 335 (4; S) _____

MCB 305 (4; S) _____

MCB 304 (4; F) or ECOL 320 (4; F) _____

BIOC 384 (3) _____ or MCB 301 (4) _____

Electives (*At least 7 units of upper division Bioinformatics electives are required.*)

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Academic Plan for a B.S. in Bioinformatics (Systems 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	3
BIOC 384 or MCB 301	3
TOTALS	15

SEMESTER 5**	Units
Tier 1	3
Tier 1	3
CSC 345	4
MCB 304 (or ECOL 320)	4
TOTALS	15

SEMESTER 6	Units
MCB 305	4
ECOL 346	4
Major Elective	4
CSC 250	3
TOTALS	15

SEMESTER 7	Units
ECOL 302	4
Second Language	4 – 5
Tier 2	3
Tier 2	3
TOTALS	14 - 15

SEMESTER 8	Units
ECOL 335	4
Major Elective	3
Tier 2	3
Second Language	4 – 5
TOTALS	14 - 15

TOTAL UNITS NEEDED: 120 UPPER DIVISION UNITS NEEDED: 42

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