

B.S. Bioinformatics (Computer Science 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) _____ DATA 363 (3) _____

COMPUTER SCIENCE FOCUS (26 units):

CSC 445 (3) _____ MATH 223 (4) _____

MATH 254 (3) _____

Choose between one sequence:

MCB 304 (F; 4) _____ MCB 305 (S; 4) _____

or

ECOL 320 (F; SS; 4) _____ ECOL 335 (S; 4) _____

Electives (*At least 8 units of upper division Bioinformatics electives are required.*):

_____ ()

_____ ()

_____ ()

_____ ()

Academic Plan for a B.S. in Bioinformatics (Computer Science 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 223 | 3 |
| CSC 120 | 4 |
| TOTALS | 15 |

| SEMESTER 4 | Units |
|---------------------|-----------|
| CHEM 241B + 243B | 4 |
| ECOL 182R + 182L | 4 |
| CSC 245 or MATH 243 | 4 |
| MATH 254 | 3 |
| TOTALS | 16 |

| SEMESTER 5 | Units |
|-------------------------|-----------|
| Tier 1 | 3 |
| CSC 445 | 3 |
| CSC 345 | 4 |
| ECOL 320 (or MCB 304)** | 3 |
| TOTALS | 14 |

| SEMESTER 6 | Units |
|-------------------------|-----------|
| ECOL 335 (or MCB 305)** | 4 |
| ECOL 346 | 4 |
| CSC 250 | 3 |
| Tier 1 | 3 |
| TOTALS | 14 |

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

| SEMESTER 8 | Units |
|-----------------|----------------|
| Major Elective | 8 |
| Tier 2 | 3 |
| Second Language | 4 – 5 |
| TOTALS | 15 - 16 |

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.

**Students must choose between MCB 304 and MCB 305 or ECOL 320 and ECOL 346.