BACHELOR OF SCIENCE DEGREE IN MOLECULAR AND CELLULAR BIOLOGY

Education and Communication Sub-Plan

NAME _______________________________ SID # __________________________
CATALOG YEAR 2018-2019 EXPECTED
GRADUATION DATE __________________________

GENERAL EDUCATION REQUIREMENTS

English Composition
ENGL 101 or 107 ............................................................. 3 ___
ENGL 102 or 108 ............................................................. 3 ___
Or
ENGL 109H ...................................................................... 3 ___

Second Language
2nd semester proficiency by credit or exam required ...

Individuals and Societies (3 courses)
Tier One ___ 150 A, B, or C ........................................... 3 ___
Tier One ___ 150 A, B, or C ........................................... 3 ___
Tier Two Individuals & Societies course ......................... 3 ___

Traditions and Cultures / Humanities (3 courses)
Tier One ___160 A, B, C, or D ....................................... 3 ___
Tier One ___160 A, B, C, or D ....................................... 3 ___
Tier Two Humanities course ........................................... 3 ___

Tier Two Arts (3 units total)
__________________________________________________________________________ 3 ___

Natural Sciences (NATS)
Requirement satisfied by MCB major course work.

Diversity Emphasis Course
(Gender/Race/Class/Ethnicity/Sexual Orient./Non-Western)
One undergraduate course must be taken from the GRCESONW list; certain Tier One and Tier Two courses can also be used to meet this requirement ...

MCB FOUNDATION COURSES

Chemistry (General & Organic Chemistry, with labs)
CHEM 141/143 OR 151 OR 161/163.................4 ___
CHEM 142/144 OR 152 OR 162/164.................4 ___
CHEM 241A & 243A (F, S, SS)*.........................3 ___ 1 ___
CHEM 241B & 243B (F, S, SS)* .........................3 ___ 1 ___
* Calculated into major GPA

Mathematics (Calculus I, & Calculus II or Biostatistics)
MATH 122A/B OR 125 OR MATH 119A* (F, S, SS)..... 3-5 ___
MATH 129 OR MATH 263 (F, S, SS)............................ 3 ___
* MATH 119A is not a pre-requisite for MATH 129

Physics (Introductory Physics)
PHYS 102/181 OR 141 OR 161H (F, S, SS) .........3 ___ 1 ___ or 4 ___
PHYS 103/182 OR 241 OR 261H (F, S, SS) .........3 ___ 1 ___ or 4 ___

MCB MAJOR (39 Unit Minimum)

Core Requirements (21 units)
MCB 195 or 295 – MCB Colloquia (F, S)..................... 1 ___
MCB 181R - Introductory Biology I (F, S) .................. 3 ___
MCB 181L - Introductory Biology I Lab (F, S) ........... 1 ___
ECOL 182R - Introductory Biology II (F, S) .............. 3 ___
ECOL 182L - Introductory Biology II Lab (F, S) ....... 1 ___
MCB 301 - Molecular Basis of Life (S)* .................... 4 ___
MCB 304 - Molecular Genetics (F)* ........................... 4 ___
MCB 305 - Cell & Developmental Biology (S)* ......... 4 ___
*MCB 301, MCB 304, and MCB 305 must be taken in sequence.

Education and Communication Sub-Plan
Upper Division Elective Courses (18 unit minimum):

Required Courses (6 units):
MCB 310- Improving Learning in Science Classrooms (F)........ 3 ___
MCB 413 Why is the Grass Green? (F)...................... 3 ___

Choose one of the following courses (3 units):
EDP 301 Educational Psych. & Child & Adoles. Dev. (F, S, SS) .... 3 ___
EDP 314 Learning in Informal Settings (F, S) .................. 3 ___
JOUR 472 Science Journalism (F) ................................ 3 ___

Choose one Lab/Research/Internship Requirement (3 units):
MCB 392/492 Directed Research (F, S, SS) ............... 3 ___
MCB 399/499 Independent Study (F, S, SS) ............... 3 ___

Choose one Lab/Research/Internship Requirement (3 units):
MCB 399H/499H Honors Independent Study (F, S, SS) ....... 3 ___
MCB 498 Senior Capstone (F, S) ................................. 3 ___
MCB 498H Honors Thesis (F, S) ................................. 3 ___
MCB 493 Internship Experience (F, S, SS) ................... 3 ___
MCB 473 Recombinant DNA (S) ...............................

Choose additional required elective courses (6 units):
Choose upper division electives to meet requirement - see back of checklist for elective options.
Writing Emphasis Elective ................................................... 3 ___
Upper Division MCB Elective: ........................................... 3 ___

SUPPORTING COURSEWORK REQUIRED FOR SUB-PLAN

MCB 391/391H/491/491H Lab Preceptorship (F, S) .......... 3 ___
MCB 397A/C STEM Outreach and Recruitment (F, S) ...... 1 ___

UNIVERSITY REQUIREMENTS:
120 total units □ 42 upper division units □
2.000+ cum GPA □ 2.000+ major GPA □
MCWA complete ___ Final 18 of 30 units complete ___
30+ total units at UA ___ 18+ MCB units at UA ___
<60 correspondence/UA exam units ___
Education and Communication Sub-Plan Upper Division Elective Courses:

**Choose one Writing Emphasis Elective (3 unit min.):**
- MCB 404 Bioethics – 3 units (F, S, SS)
- MCB 422 Problem Solving with Genetic Tools – 3 units (F, SS)
- MCB 473 Recombinant DNA Methods and Applications – 4 units (S)*
- MCB 498 Senior Capstone – 3 units (F, S)
- MCB 498H Senior Honors Thesis – 3 units (F, S)
- ECOL 379 Evidence Based Medicine – 3 units (S)

**Choose one MCB Elective (3 unit min.):**
- MCB 315 Quantitative Biology – 3 units (F, even years only)
- MCB 325 Biology of Cancer – 3 units (F)
- MCB 422 Problem Solving w/ Genetic Tools – 3 units (F, SS)
- MCB 425 Cancer Discoveries – 3 units (S)
- MCB 442 Human Genetics: Sex, Crime, and Disease – 3 units (S)
- MCB 447 Big Data in Molecular Biology and Medicine – 3 units (F, odd years only)
- MCB 480 Introduction to Systems Biology – 3 units (F)
- MCB 482 Modeling Human Disease – 3 units (S)

* cannot be used to fulfill two sub-plan requirements

Course offerings are subject to change. Please consult the Schedule of Classes for specific semester course information.