# **B.S. in MICROBIOLOGY** Suggested 4-Year Academic Flowchart

Undated 7/11/2022

FRESHMAN SOPHOMORE JUNIOR SENIOR Spring Spring Fall Spring Spring Introductory Diversity and Intro to Cell and General General Principles of Microbial Cell Biology Ecology and BIO 461 or 462 (2)4 History of Life Molecular Biolog Microbiology I Microbiology II Genetics Physiology Fvolution GWR; STAT 218; Jr Star MCRO 224 (5) BIO 351 (5) MCRO 424 (5) BIO 452 (4) BIO 150 (4) BIO 161 (4) BIO 263 (4) MCRO 225 (5) Recom: CHEM 110 BIO 161; CHEM 12 Select 3 courses from the following Organic Chemistry 12, or 316. Recom ICRO 225; CHEM CHEM 216, 31 124, or 127) (BIO 150 or 161) (MCRO 224) BIO 426, BIO 475, MCRO 402, MCRO 423, or MCRO or 128, Recom 263; STAT 217 314 or 369) 316. Recom: CHE CHEM 129) 436 (11-13)\* ГВ2 & B31 314 or 369) CHEM 217 (3) Elective Elective Elective Elective CHEM 216 w/min C Elective Elective  $(3)^{3,4,5}$  $(3-4)^{3,4,5}$  $(3-4)^{3,4,5}$ or Instr. Consent. Coreq: CHEM 220)  $(4)^{3,4,5}$  $(4)^{3,4,5}$  $(2)^{3,4,5}$ General Chem for General Chem for General Chem for Organic Chemistry Organic Chem Lab **Biochemistry** Aariculture & Life Aariculture & Life Agriculture & Life for Life Sciences II Science I Science II Science III CHEM 314 or CHEM 127 (4) CHEM 128 (4) CHEM 129 (4) CHEM 216 (5) CHEM 220 (1) 369 (5)<sup>2</sup> (CHEM 126 or 129 (CHEM 127 or AP (CHEM 128) w/min C- or Instr. (Coreq: CHEM 217) [B1 & B3] Consent) [Upper-Div B] Applied Statistics Calculus for the for the Life College Physics I College Physics II College Physics III Life Sciences I Sciences MATH 161 (4) STAT 218 (4) PHYS 121 (4) PHYS 122 (4) PHYS 123 (4) (PHYS 118, 121, PHYS 121 or 141) PHYS 122) ΓB41 [GE Elective] Oral Communication COMS 101/102 (4)\*\* GE (4) **GE (4)** GE (4) GE (4) **GE (4)** GE (4) GE (4) [A1] Expository Writing Free Elective Free Elective Free Elective Free Elective ENGL 133/134 (4)\*\* GE (4) GE (4)  $(4)^{1}$  $(2-3)^{1}$  $(2-4)^1$  $(2-3)^{1}$ [A2] Reasoning, Argumentation, & Writing [A3] Graduation Writing Requirement GWR\* COMS 126, 145, ENGL 145, 147, ES 145, PHIL 126, or WGQS 145 (4)\*\* **GE (4)** Students can attempt to fulfill the requirement after 90 earned units: (Completion of GE A2 with a C- or better) students should complete the requirement before senior year) Can be taken anytime between Winter of Freshman and Winter of Sophomore Years. 16 16 16 14 16 16 16 14 13 16 13 14 TOTAL: 180

## Notes:

### MOST GENERAL EDUCATION COURSES CAN BE TAKEN IN ANY ORDER AS LONG AS PREREQUISITES ARE MET

- \* Refer to current catalog for prerequisites.
- \*\* One course from each of the following GE areas must be completed: A1, A2, A3, C1, C2, Lower-Division C Elective, Upper-Division C, D1, D2, Upper-Division D, Lower-Division E, F, and GE Elective. Upper-Division C and Upper-Division D should be taken only after Junior standing is reached (90 units).

Refer to online catalog for GE course selection, United States Cultural Pluralism (USCP) and Graduation Writing Requirement (GWR).

USCP requirement can be satisfied by some (but not all) courses within GE categories: Upper-Division B, C1, Upper-Division C, D1, D2, Upper-Division D, or E.

110-14 units of Free Elective credit required. Recommended: SCM 150 workshops (1) for Math/Science courses be taken in your first year. If a General Education (GE) course is used to satisfy a Major or Support requirement, additional units of Free Electives may be needed to complete the total units required for the degree. Up to 6 units of free electives may need to be at the 300-400 level to ensure completion of the required minimum of 60 units of upper-division courses. Consult college advisor for additional information.

#### Legend:



<sup>&</sup>lt;sup>2</sup> CHEM 369 suggested for students who plan to pursue graduate school or a health professions career.

<sup>&</sup>lt;sup>3</sup> 19-21 units of Elective credit required in major. See catalog for course options and details. Consultation with an advisor is recommended before selecting Electives; bear in mind that selections may impact pursuit of post-baccalaureate studies and/or goals. At least 14-16 units must be upper-division (300-400 level) to ensure completion of the required minimum of 60 units of upper-division courses

<sup>&</sup>lt;sup>4</sup> If BIO 462 is used to meet the senior project requirement, it cannot also be counted as an Elective.

<sup>&</sup>lt;sup>5</sup> Students planning to attend graduate or professional schools are strongly advised to meet with their advisors to ensure that they meet necessary prerequisites for entry into these programs. Additional courses in math and chemistry may be necessary.

<sup>&</sup>lt;sup>6</sup> If a General Education (GE) course is used to satisfy a Major or Support requirement, additional units of Free Electives may be needed to complete the total units required for the degree.