

# 2018-19 BS Biological Sciences Without Concentration

120 Credit minimum – Grade of C- or higher for all classes

## GENERAL REQUIREMENTS

### COMMUNICATIONS

WRTG 111X Intro to Academic Writing (3)\_\_\_\_  
WRTG 211X or 212X or 213X or 214X.(3)\_\_\_\_  
COJO 121X or 131X or 141X (3)\_\_\_\_

### GER Arts, Humanities, Social Sciences, & Ethics:

All GER in this category require WRTG 111 placement; 200 level courses- sophomore standing or higher; 300 level - junior standing or higher

1 course from Art category

1 course from Humanities category

2 courses from Social Science category (must be two different disciplines)

1 additional course from any above Arts/Humanities/Social Science category

*See attached for category lists of courses.*

1 GER Ethics: BA 323; COJO 300; JUST 300; NRM 303; PHIL 322; or PS 300

### MATHEMATICS & STATISTICS:-

Requires recent Math Placement and/or prereqs

STAT 200X Elementary Probability & Statistics (3)\_\_\_\_

**OR** STAT 300 Statistics (3)\_\_\_\_

Math 230X Calculus with Applications (3)\_\_\_\_

**OR** Math 251X Calculus (4)\_\_\_\_

### NATURAL SCIENCE:-

CHEM 105 is a pre/co-req for BIOL 115 -both require MATH 151 & WRTG 111 or higher placement. You MUST have passed CHEM 105 (C- or higher) prior to taking BIOL 115 or be concurrently enrolled – for concurrent enrollment, if you drop CHEM 105 during the semester, the BIOL 115 faculty may also drop you from their course as well.

CHEM 105 General Chemistry I (4)\_\_\_\_

**and** CHEM 106 General Chemistry II (4)\_\_\_\_

PHYS 103 College Physics I, Fall DEVM 105 & WRTG 111 placement (4)

**and** one of the following:

PHYS 104 College Physics I – spring (PHYS 103) (4) \_\_\_\_

**OR** CS 103 Introduction of Computer Programming – (math placement at 100 level) (3) \_\_\_\_

**OR** CS 201 Computer Science I – (math placement at 200 level; high school programming or CS 103) (3)\_\_\_\_

**OR** PHYS 211 General Physics I (concurrent enrollment in Math 252) (4) \_

**and** one of the following:

PHYS 212 General Physics II – (concurrent enrollment in Math 253) (4) \_\_\_\_

**OR** CS 103 Introduction of Computer Programming – (math placement at 100 level) (3) \_\_\_\_

**OR** CS 201 Computer Science I – (math placement at 200 level; high school programming or CS 103) (3)\_\_\_\_

### LIBRARY & INFO SKILLS:- (0-1)

LS competency test\_\_\_\_ OR LS 101X (1)\_\_\_\_

### UPPER DIVISION CREDITS (300 & 400-level):- (39)

Transfer Credits \_\_\_\_ minimum of 24 UAF Credits \_\_\_\_

*A minor is optional with a BS degree – see current catalog for more details and requirements. If a minor is selected, there will be fewer free electives required*

## MAJOR REQUIREMENTS

*All Biology courses higher than BIOL 116X listed below have BIOL 115X/116X as well as at least MATH 151X/WRTG 111X placement prereqs (except BIOL 111X & 112X) (additional prereqs in parenthesis)*

1. Complete the following:

BIOL 115 Fundamentals of Biology I – (Math 151 & WRTG 111 placement, CHEM 105 or concurrent enrollment) (4)\_

BIOL 116 Fundamentals of Bio II – (BIOL 115X) (4)\_\_\_\_

BIOL 260 Principles of Genetics– (CHEM 105, Math 151, LS 101) (4)\_\_\_\_

BIOL 360 Cell & Molecular – spring (BIOL 260, CHEM 105 & CHEM 106) (3)\_\_\_\_

BIOL 371 Principles of Ecology - Fall (4)\_\_\_\_

BIOL 481 Principles of Evolution – (BIOL 260; STAT 200 or concurrent enrollment in stats, junior standing or higher) (4) \_\_\_\_

BIOL 310 Animal Physiology- Fall (CHEM 105/106) (4)\_\_\_\_

**OR** BIOL 334 Structure and Function in Vascular Plants- odd Spring (MATH 151, WRTG 111 & 211/etc) ^ (4)\_\_\_\_

**OR** BIOL 342 Microbiology- Spring (CHEM 105) (4)\_\_\_\_

**OR** BIOL 111 Human Anatomy & Physiology I- Fall/summer (Placement in DEVM 105 and WRTG 111X or higher) (4)\_\_\_\_

**and** BIOL 112 Human Anatomy & Physiology II- Spring/summer (BIOL 213X) (4)\_\_\_\_

CHEM 321 Organic Chem I- Fall (CHEM 106) (4)\_\_\_\_

**and** CHEM 325 Organic Chem II- Spring (CHEM 321) (4)\_\_\_\_

**or** CHEM 351 General Biochem Metabolism-Spring (CHEM 321) (3)\_

2. Complete the following Biology electives - (list attached):

Organismal – one course from List D (3-4)\_\_\_\_

Biology – four additional courses at the 200 level or above, at least three from lists A, B, C, D or E (12-16)\_\_\_\_

Independent study (BIOL 397 or BIOL 497) or a research experience course (URSA 388, URSA 488 or BIOL 490) may be substituted by petition for a maximum of two required elective courses in biology (3-4 credits per substituted course). These can also potentially be utilized as a capstone research project as well. Study content determines to which list the course will be assigned.

3. BIOL 400 (0)\_\_\_\_ Complete a biology capstone project. Can be met through petition following the completion of a mentored research project with a faculty member (e.g., by taking BIOL 497 or BIOL 490 or without course credits) or automatically by completing at least **ONE** of the following courses. The below classes can also be utilized to meet one of the specific Biology list electives above to which it's assigned.

BIOL 434 Structure and Function in Vascular Plants- odd spring (MATH 151, WRTG 111X & 211X/etc) (3) \_\_\_\_

BIOL 441 Animal Behavior - fall (BIOL 371, BIOL 310, COJO 131X/141X, WRTG 111X & 211X/etc, coreq BIOL 481) (3) \_\_\_\_

BIOL 466 Advanced Cell & Molecular Laboratory –spring (BIOL 360)(3)\_\_\_\_

BIOL 472 Community Ecology – even fall (BIOL 371, WRTG 111X & 211X/etc) (3) \_\_\_\_

BIOL 473 Limnology – odd fall (BIOL 371, CHEM 105X & 106X, WRTG 111X & 211X/etc) (3) \_\_\_\_

BIOL 491 The Human Microbiome – fall (BIOL 260 or Stat 200)(4)\_\_\_\_

BIOL 394 MORE Behavioral Neurobiology – spring (3) \_\_\_\_

### ELECTIVES (for a program total of 120 credits):

\_\_\_\_\_ ( ) \_\_\_\_\_ ( ) \_\_\_\_\_

\_\_\_\_\_ ( ) \_\_\_\_\_ ( ) \_\_\_\_\_

\_\_\_\_\_ ( ) \_\_\_\_\_ ( ) \_\_\_\_\_

^ or permission of instructor