**2018-19 BA Biological Sciences**

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

**GENERAL REQUIREMENTS**

**COMMUNICATIONS (9)**
- 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 111X placement; 200 level coursework: 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 See attached for category lists of courses.

**SOCIAL SCIENCE/HUMANITIES (18)**
Each area must include at least 6 credits. Twelve credits of a non-English language taken at the university level may fulfill the humanities requirement. May use courses in minor but only those beyond 15 credits (ie 18 credit minor means you can double count 3 credits). May not double count from GER Arts, Humanities, Social Sciences & Ethics above. **As part of this requirement, take at least 9 credits of upper division.**


**MINOR:**
(min. 15 credits)
As part of this requirement, take at least 3 credits of upper division if applicable.


**MATHEMATICS & STATISTICS (6-7)**
Requires recent Math Placement and/or prerequisites

- STAT 200X Elementary Probability & Statistics (3)
- MATH 151X or 152X or 156 or 230 or 251 (3-4)

**NATURAL SCIENCE (8)**

- CHEM 105X General Chemistry I (4)
- CHEM 106X General Chemistry II (4)

**NOTE:** CHEM 105X is a prereq (C- or higher)/co-req for BIOL 115X—both require MATH 151X & WRTG 111X or higher placement. For concurrent enrollment, if you drop CHEM 105X during the semester, you may be dropped from BIOL 115X as well.

**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

**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 preqs (except BIOL 111X & 112X) (prereqs in parenthesis)

1. Complete the following (20):
   - BIOL 115X Fundamentals of Biology I - (CHEM 105X or concurrent, MATH 151X & WRTG 111X placement) (4)
   - BIOL 116 Fundamentals of Biology II - (BIOL 115X) (4)
   - BIOL 260 Principles of Genetics – (CHEM 105X, MATH 151X, LS 101) (4)
   - BIOL 481 Principles of Evolution – (BIOL 260; STAT 200 or concurrent enrollment in STAT 200, junior or higher) (4)
   - CHEM 321 Organic Chem I - fall (CHEM 106X) (4)

   One of the following (3-4):
   A. PHYS 103 College Physics I – fall/summer (DEVM 105 & WRTG 111X placement) (4)
   B. CS 103 Introduction of Computer Programming – (math placement at 100 level) (3)
   C. CS 201 Computer Science I – (placement at 200 level; high school programming or CS 103) (3)

2. Complete 2 of the listed 3 biology breadth requirements (7-12):
   Breadth courses serve as preqs for many upper division biology electives, therefore select according to anticipated biology electives
   A. BIOL 360 Cell & Molecular Biology –spring (BIOL 260, CHEM 105X & 106X) (3)
   B. BIOL 371 Principles of Ecology – fall (4)
   C. Physiology—**complete one of the following:**
      - BIOL 310 Animal Physiology – spring (CHEM 105X/106X) (4)
      - OR BIOL 434 Structure and Function in Vascular Plants, - odd spring (MATH 151, WRTG 111X & 211X/etc) (4)
      - OR BIOL 342 Microbiology - spring (CHEM 105X) (4)
      - OR BIOL 111X Human Anatomy & Physiology I – fall/summer (Placement in DEV 105 and WRTG 111X or higher) (4)
      - **AND** BIOL 112X Human Anatomy & Physiology II – spring/summer (BIOL 111X) (4)

3. Complete three (3) elective courses from biology course lists A, B, C, D or E (see attached) (9-12). 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).

4. 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 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 spring (BIOL 371, WRTG 111X & 211X/etc, coreq) (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