2018-19 BS Biological Sciences
Ecology & Evolutionary 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)____
STAT 401 Regression & Analysis of Variance
OR STAT 402 Scientific Sampling (3-4)

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 DEV 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)____

PHYS 211 General Physics I (4)____
and one of the following:
PHYS 212 General Physics II – (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 preqs
(except BIOL 111X & 112X) (additional preqs 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 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 DEV 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)____
CHEM 325 Organic Chem II- Spring (CHEM 321) (4)____
or CHEM 351 General Biochemistry: Metabolism – spring (CHEM 321)(3)____

2. Complete the following Biology electives (6 courses):
BIOL 371 Principles of Ecology – fall (4)____
Two additional courses from List C (6-8)
One additional course from List D (3-4)
One additional course from List A, B or E (3-4)
One additional course from List A,B,C,D or E (3-4)

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):

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^ or permission of instructor