2014-15 BS Biological Sciences
Without Concentration

120 Credit minimum *designates only grades of “C” or better (not ‘C-‘) may be used to fulfill these requirements

GENERAL REQUIREMENTS

*COMMUNICATIONS:* (9)
ENGL 111X Intro to Academic Writing (3)___
ENGL 211X Academic Writing -Literature
OR ENGL 213X Academic Writing - Social & Nat. Sci.(3)___
COMM 131X Group Communications OR 141X Public Speaking (3)___

*PERSPECTIVES ON THE HUMAN CONDITION:*-(18-22)
Complete 6 courses listed OR 4 of those listed plus 2 semester length courses in a single AK Native or other non-English language or 3 semester length courses (9 credits) in American Sign Language. All Perspectives Core require English 111 placement; 200 level courses- sophomore standing or higher; 300 level - junior standing or higher

ANTH 100X/SOC 100X Individual, Society & Culture (3)___
ECON/PS 100X World Political Economy (3)___
HIST 100X World History (3)___
ART/MUS/THR 200X or HUM 201X or ANS 202X Art Appreciation (3)___
ENGL/LFL 200X World Literature (3)___
BA 323X or COMM 300X or JUST 300X or NRM 303X or PHIL 322X or PS 300X (these are all 300 level Ethics courses) (3)___

Language option as listed above- but may not be counted under minor requirements:
____________________ ( )___
____________________ ( )___
____________________ ( )___

*MATHEMATICS & STATISTICS:*- (6-7)
Requires recent Math Placement and/or prereqs
*STAT 200X Elementary Probability & Statistics (3)___
OR *STAT 300 Statistics (3)___
*Math 272X Calculus for Life Sciences (3)___
OR *Math 200X Calculus (4)___

*NATURAL SCIENCE:*- (16)
CHEM 105 is a pre/co-req for BIOL 115 -both require MATH 107 & ENGL 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 M 105 & ENGL 111 placement (4)___
and *PHYS 104 College Physics II - Spring (4)___

LIBRARY & INFO SKILLS:*-(0-1)
LS competency test ___ OR LS 100X or 101X (1)___

WRITING AND ORAL INTENSIVE COURSES:
Required: 2 DESIGNATED (W); AND
1 DESIGNATED (O) COURSE OR 2 DESIGNATED (O/2):
_________________________ (W)___
_________________________ (W)___
_________________________ (O) OR __________________(O/2)______

UPPER DIVISION CREDITS (300 & 400-level):- (39)
Transfer Credits ___ minimum of 24 UAF Credits ___

*MAJOR REQUIREMENTS

All Biology courses higher than BIOL 115X listed below have BIOL 115X/116X as well as at least MATH 107X/ENGL 111X placement prereqs (except BIOL 213X & 214X) (additional prereqs in parenthesis)

*1. Complete the following (34-39):
*BIOL 115 Fundamentals of Biology I – Fall/Summer (MATH 107 & ENGL 111 placement, CHEM 105 or concurrent enrollment) (4)___
*BIOL 116 Fundamentals of Bio II – Spring/Summer (BIOL 115X) (4)___
*BIOL 260 Principles of Genetics- fall/spring (CHEM 105, MATH 107) (4)___
*BIOL 360 Cell & Molecular – typically spring (BIOL 260, CHEM 105 & CHEM 106) (3)___
*BIOL 371 Principles of Ecology - Fall (LS 100/101 or exam) (4)___
*BIOL 481 Principles of Evolution – fall/spring (BIOL 260; STAT 200 or concurrent enrollment, 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 107, ENGL 111 & 211/213) ^ (W) (4)___
OR *BIOL 342 Microbiology- Spring (CHEM 105) (4)___
OR * BIOL 213 Human Anatomy & Physiology I- Fall/summer (Placement in DEV M 105 and ENGL 111X or higher*);
Completion of CHEM 103X or CHEM 105X) (4)___
and
*BIOL 214 Human Anatomy & Physiology II- Spring/summer (BIOL 213X, CHEM 103X or 105X) (4)___

*CHEM 321 Organic Chem I- Fall (CHEM 106) (4)___
and *CHEM 322 Organic Chem II- Spring (CHEM 321) (3)___
or *CHEM 451 General Biochem Metabolism-Spring (CHEM 321) (3)___

2. Complete the following electives – at least one course must satisfy W requirement: - (15-20) (lists on reverse):

*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 or D (12-16)___

3. Complete a biology capstone project (0-4) Can be met through petition following the completion of a mentored research project w/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:

*BIOL 434 Structure and Function in Vascular Plants- odd Spring (MATH 107, ENGL 111 & 211/213) ^ (W) (4)___
*BIOL 472 Community Ecology- even Fall (BIOL 371, ENGL 111 & 211/213) ^ (W) (3)___
*BIOL 441 Animal Behavior- Fall (BIOL 371, BIOL 310, COMM 131/141, ENGL 111 & 211/213; BIOL 481 co-req) ^ (W, O/2) (4)___
*BIOL 473 Limnology odd Fall (BIOL 371, CHEM 105 & 106, ENGL 111 & 211/213) ^ (W) (3)___
*BIOL 403 Metabolism & Biochemistry- Fall (CHEM 105 & 106, BIOL 360, COMM 131/141, ENGL 111 & 211/213) ^ (W) (4)___

^ or permission of instructor

ELECTIVES** (for a program total of 120 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.
2014-15 BA & BS Biological Sciences Degree Programs
List A-D Supplement – all require grade of ‘C’ or higher*

*List A – Cell and Molecular Biology
- BIOL 342 Microbiology (3)
- BIOL 360/261 Cell and Molecular Biology (3)
- BIOL 403 Metabolism and Biochemistry (W) (4)
- BIOL 417 Neurobiology (O) (3)
- BIOL 462 Concepts of Infectious Disease (O) (3)
- BIOL 465 Immunology (3)
- BIOL 4xx Principles of Virology (3)
- CHEM 322 Organic Chemistry II (3)
- CHEM 450 General Biochemistry – Macromolecules (3)
- CHEM 451 General Biochemistry – Metabolism (3)
- CHEM 470 Cellular and Molecular Neuroscience (3)
- CHEM 474 Neurochemistry (3)

*List B – Physiology
- BIOL 310 Animal Physiology (4)
- BIOL 317 Comparative Anatomy (4)
- BIOL 335 Epidemiology (3)
- BIOL 342 Microbiology (4)
- BIOL 417 Neurobiology (O) (3)
- BIOL 422 Physiology and Ecology of Overwintering (3)
- BIOL 434/334 Structure & Function in Vascular Plants, (W)(4)
- BIOL 441 Animal Behavior, (W, O/2) (3)
- BIOL 445 Environmental Toxicology (W, O) (3)
- BIOL 457 Environmental Microbiology (W) (3)
- BIOL 458 Vertebrate Endocrinology (3)
- BIOL 459 Wildlife Nutrition (O/2) (4)
- BIOL 462 Concepts of Infectious Disease (O) (3)
- BIOL 465 Immunology (3)
- BIOL 494 Principles of Virology (3)

*List C – Ecology and Evolutionary Biology
- BIOL 371/271 Principles of Ecology (4)
- BIOL 418 Biogeography (3)
- BIOL 422 Physiology and Ecology of Overwintering (3)
- BIOL 433 Conservation Genetics (3)
- BIOL 441 Animal Behavior, (W, O/2) (3)
- BIOL 457 Environmental Microbiology (W) (3)
- BIOL 462 Concepts of Infectious Disease (O) (3)
- BIOL 469 Landscape Ecology and Wildlife Habitat (O) (3)
- BIOL 471 Population Ecology (3)
- BIOL 472 Community Ecology (W) (3)
- BIOL 473 Limnology (W) (3)
- BIOL 474 Plant Ecology (4)
- BIOL 476 Ecosystem Ecology (O) (3)
- BIOL 483 Stream Ecology (3)
- BIOL 485 Global Change Ecology (3)
- BIOL 486 Vertebrate Paleontology (3)
- BIOL 487 Conceptual issues in Evolutionary Biology (3)
- BIOL 488 Arctic Vegetation Ecology: Geobotany (3)
- BIOL 489 Vegetation Description and Analysis (3)
- WLF 301 Design of Wildlife Studies (3)
- WLF 410 Wildlife Populations and Their Management (3)

*List D - Organismal
- BIOL 301 Biology of Fishes (4)
- BIOL 305 Invertebrate Zoology (4)
- BIOL 317 Comparative Anatomy (4)
- BIOL 331 Systematic Botany (4)
- BIOL 406 Entomology (4)
- BIOL 418 Biogeography (4)
- BIOL 425 Mammalogy (W) (3)
- BIOL 426 Ornithology (W/O/2) (3)
- BIOL 427 Ichthyology (4)
- BIOL 486 Vertebrate Paleontology (3)
- BIOL 489 Vegetation Description and Analysis (3)

Once the student decides on a concentration, the student should send an email to registrar@uaf.edu with the student’s name, ID number, and choice of concentration. This will assist with correct tracking in DegreeWorks.