**University of Wyoming, College of Arts & Sciences**

**Requirements Checklist – Physiology**

For students matriculating fall 2003 and after.

Student: ___________________  Advisor: ___________________  Initial Date of Program: ______

**University Studies Program:**

(P) Physical Activity & Health  1 course, 1 credit

(I) Intellectual Community  1 course, 1-3 credits

(V) U.S. & Wyoming Constitutions  1 course, 3 credits

(WA) Writing 1  1 course, 3 credits

(QA) Quantitative Reasoning 1  1 course, 3 credits

(QB) Quantitative Reasoning 2  1 course, 3 credits

(O) Oral Communication  1 course, 3 credits

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Sciences – SB Biological; SE Earth; SP Physical; S Integrated Science

1 course, 4 credits  ______________________________  1 course, 4 credits

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Cultural Context – 9 hours total C, CH, CS, CA; at least 3 courses from 3 of 4 different categories

Arts (CA)  1 course, 3 credits

Humanities (CH)  1 course, 3 credits

Social science (CS)  1 course, 3 credits

Integrated Cultural Context (C)  1 course, 3 credits

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**Additional USP Requirements:**

These may be a part (embedded) of courses in the above USP categories or courses in the major.

(WB) Writing 2

 WC) Writing 3

(L) Information Literacy

(D) U.S. Diversity

(G) Global Awareness

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**A&S Core:**

Foreign Language: For students at the introductory level of a language, 2 courses (8 credits total) in the same language (with a minimum grade of C in the second semester) are required.

1 course, 4 credits  ______________________________  1 course, 4 credits

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Non-Western (NW): Approved courses may simultaneously fulfill other requirements in University Studies program, the A&S Core, or courses in the major, minor, or second major. Approved courses are listed on the A&S Website.

1 course, 3 credits  ______________________________

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Upper Division Courses: 9 credits (3 courses) of Upper Division courses (3XXX-level or above) outside the department/program in which the student’s major resides and none that are cross-listed with courses in the department of the major. These courses cannot be used to also fulfill the USP components of P, I, QA, QB, O, V, WA, S, SB, SE, SP, C, CA, CS, or CH. These courses may also be used in a minor or a second major. These courses should not have ZOO prefixes. Please note that LIFE 3050 (Genetics) may be listed as one of these courses.

1 course, 3 credits  ______________________________

1 course, 3 credits  ______________________________

1 course, 3 credits  ______________________________

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**University Upper Division Requirement:**

48 credits (3XXX-level or above): 30 of which must be earned from the University of Wyoming.

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The following courses are for the major requirements and are offered in no particular order. Please consult with your advisor for scheduling sequence.

### COURSE

#### A. MATHEMATICS

- **□ MATH 1450 Algebra and Trigonometry**
  - USP: QA
  - CREDITS: 5.0
  - PREREQUISITES: C in MATH 0925 or Level 3 Math Placement or Math ACT 23, SAT 600
  - *(MATH 1450 can be completed with MATH 1400 and MATH 1405)*

- **□ MATH 2200 Calculus I**
  - USP: QB
  - CREDITS: 4.0
  - PREREQUISITES: C in MATH 1405 or 1450 or level 5 on Math Placement or Math ACT 27, SAT 600

- **□ MATH 2205 Calculus II**
  - or
  - **□ STAT 2050 Fundamentals of Statistics**
  - or
  - **□ STAT 2070 Intro Statistics for the Social Sciences**
  - CREDITS: 4.0
  - PREREQUISITES: C in MATH 1000, 1400 or equiv

#### B. CHEMISTRY

- **□ CHEM 1020 General Chemistry I**
  - USP: SP
  - CREDITS: 4.0
  - PREREQUISITES: Math ACT 23 or concur MATH 1400, 1405 or 1450

- **□ CHEM 1030 General Chemistry II**
  - CREDITS: 4.0
  - PREREQUISITES: CHEM 1020

- **Two additional CHEM courses (not CHEM 1000):**
  - □ Course: ________________________________
  - □ Course: ________________________________

**Note:** If a student is planning on medical, dental, optometry, or PA schools, they will need 2 semesters of organic chemistry (CHEM 2420 + CHEM 2440). In addition, some programs have additional requirements (e.g., biochemistry, cell biology, microbiology).

#### C. PHYSICS

- **□ PHYS 1110 General Physics I (fall)**
  - USP: SP
  - CREDITS: 4.0
  - PREREQUISITES: MATH 1450, 1405

- **□ PHYS 1310 College Physics I (fall)**
  - CREDITS: 4.0
  - PREREQUISITES: MATH 2200 & concur 2205

- **□ PHYS 1120 General Physics II (spring)**
  - CREDITS: 4.0
  - PREREQUISITES: PHYS 1110

- **□ PHYS 1320 College Physics II (spring)**
  - CREDITS: 4.0
  - PREREQUISITES: PHYS 1310, MATH 2200, 2205 & concur MATH 2210

#### D. BIOLOGY and ZOOLOGY

- **□ LIFE 1010 General Biology**
  - CREDITS: 4.0
  - PREREQUISITES: C in MATH 0921 or Level 2 on Math Placement or Math ACT 21, SAT 600

- **□ LIFE 2022 Animal Biology (spring)**
  - CREDITS: 4.0
  - PREREQUISITES: C in LIFE 1010 and CHEM 1000 or 1020

- **□ or MICR/MOLB 2021 General Microbiology**
  - CREDITS: 4.0
  - PREREQUISITES: LIFE 1010 & 1 of LIFE 2022, 2023 or MICR/MOLB 2021 w/C in ea.

- **□ or MICR/MOLB 2240 Medical Microbiology**
  - CREDITS: 5.0
  - PREREQUISITES: C in CHEM 1020 (preferred) or CHEM 1000; soph.

- **□ LIFE 3050 Genetics**
  - CREDITS: 4.0
  - PREREQUISITES: C in ZOO 3115 &/or Pharmacy 1 standing

- **□ ZOO 3115 Human Systems Physiology**
  - CREDITS: 4.0

- **□ ZOO 4125 Integrative Physiology**
  - CREDITS: 4.0

#### E. WRITING IN BIOLOGY

- **□ ZOO 4100 Writing in Zoology**
  - CREDITS: 3.0
  - PREREQUISITES: WA, WB & prior or concur reg for upper division ZOO, BOT, LIFE/BIOL course
LIFE/ZOO/MOLB/PHCY/ANSCI ELECTIVE COURSES. Students must select at least 12 credit hours from the courses listed below. These courses may also be listed in "G" as 'Credits in the Major' as well as for the University Upper Division Requirement as they are all 3000- and 4000-level courses. If a student elects a concentration (see section that follows), then all of those courses may be used to meet this requirement.

Select from:

- ANSC 4120 Prin Mammal Reprod, 3 credits
- LIFE 3500 Evolutionary Biology, 3 credits
- LIFE 3600 Cell Biology, 4 credits
- ZOO 4340 Develop Biol & Embry, 4 credits
- ZOO 4735 Adv Topics Physiol, 2+ credits
- ZOO 3010 Vert Anatomy, Embry & Histology, 4 credits
- ZOO 4190 Comparative Environ Physiol, 4 credits
- ZOO 4280 Intro Neuroscience, 3 credits
- ZOO 4290 Neural Mechanisms of Behavior, 3 credits
- ZOO 3600 Principles of Animal Behavior, 3 credits
- MOLB 3610 Prin Biochemistry, 4 credits
- ZOO 4110 HIV/AIDS, 3 credits
- MOLB 4100 Clinical Biochemistry, 3 credits
- ZOO 4140 Histology, 4 credits
- MOLB 4600 General Biochemistry I, 3 credits
- ZOO 4670 Cell Physiology, 4 credits
- MOLB 4610 General Biochemistry II, 3 credits
- PSYC 4080 Physiol Psychology, 4 credits - SB
- ZOO 3021 Physiology of Exercise, 3 credits (Prerequisite: ZOO 2040/2041)
- ZOO 4650 General Psychology, 4 credits
- MOLB 4190 Comparative Environ Physiol, 4 credits
- ZOO 4190 Comparative Environ Physiol, 4 credits
- ZOO 4280 Intro Neuroscience, 3 credits
- ZOO 4290 Neural Mechanisms of Behavior, 3 credits
- ZOO 4340 Develop Biol & Embry, 4 credits
- PSYC 4080 Physiol Psychology, 4 credits
- PHCY 4450 Pathophysiology, 4 credits
- ZOO 4190 Comparative Environ Physiol, 4 credits
- ZOO 4280 Intro Neuroscience, 3 credits
- ZOO 4290 Neural Mechanisms of Behavior, 3 credits
- ZOO 4340 Develop Biol & Embry, 4 credits

PHYSIOLOGY MAJORS MAY ALSO CHOOSE A CONCENTRATION

Concentration electives may be substituted for in “F” above. Concentrations appear on the transcript, not on the diploma.

**Concentration in ECOPHYSIOLOGY**
Select at least 3 courses
- LIFE 3400 General Ecology, 3 credits
- ZOO 3010 Vert Anat Embry & Histol, 4 credits
- ZOO 3010 Vert Anat Embry & Histol, 4 credits
- ZOO 4190 Comparative Environ Physiol, 4 credits

**Concentration in CELL PHYSIOLOGY**
Select at least 3 courses
- LIFE 3400 General Ecology, 3 credits
- ZOO 3010 Vert Anat Embry & Histol, 4 credits
- ZOO 4190 Comparative Environ Physiol, 4 credits

**Concentration in NEUROSCIENCE**
Select at least 3 courses
- ZOO 3010 Vert Anat Embry & Histol, 4 credits
- ZOO 5100 Struct Func Nerv Syst, 4 credits
- ZOO 3600 Prin Animal Behavior, 3 credits
- ZOO 4280 Intro Neuroscience, 3 credits
- ZOO 4290 Neural Mech of Behavior, 3 credits
- MOLB 4400 Immunology, 4 credits
- MOLB 4600 General Biochemistry I, 3 credits
- MOLB 4610 General Biochemistry II, 3 credits
- PSYC 4080 Physiol Psychology, 4 credits
- PSYC 4080 Physiol Psychology, 4 credits - SB

G. CREDITS IN THE MAJOR. These will be mainly ZOO prefix courses and other courses that are deemed acceptable and as approved by a student’s adviser. Students must complete at least 30 (but not more than 60) credit hours with grades of C or better in all courses used to meet this requirement. Courses used to fulfill the Upper Division/Outside Major requirement should not also be listed here, but courses listed in "F" should be listed here. All courses selected for an optional concentration should also be listed here. ZOO 4900, ZOO 4971, and ZOO 4975 cannot be included here, but do count in the 48-cr hr upper division category.

**COURSE**

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<th>USP</th>
<th>CREDITS</th>
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□ Course: ________________________________ _______ ______ ______