FISHERIES & WILDLIFE SCIENCES CURRICULUM (revised Fall 2014)

125 hours minimum required for graduation
Minimum grade of C− required for all coursework applied toward the degree

I. Pre-Professional Core (44-48 hours)

A. Communications (6 credit hours)

English 1000 – Exposition and Argumentation (3) Fall/Spring/Summer
Communications - choose one:
• Ag Educ 2220 Verbal Communication in Agriculture (3) Fall/Spring [Soph standing]
• Comm 1200 Intro to Speech Communication (3) Fall/Spring/Summer
• PRT 3231 Principles of Outdoor Interpretation (3) Spring

Writing intensive credits – 3 courses required, one upper-level in major  [prereq: English 1000] (check EVERY sem)

B. Quantitative / Analytical (9 credit hours)

Math 1100 College Algebra (3) Fall/Spring/Summer - waived if a student scores a 66% or higher on the Math Department ALEKS exam, or has earned a C− or higher in a Calc I or equivalent course.
Math 1400 Calculus for Social and Natural Sciences (3) Fall/Spring/Summer [prereq: Math 1100]
Statistics – choose one:
• Stat 2530 Statistical Methods in Nat Resources (3) Spring [prereq: College Algebra]
• Stat 1300 Elementary Statistics (3) Fall/Spring/Summer [prereq: College Algebra]
• Stat 1400 Elementary Statistics for Life Sciences (3) Fall/Spring [prereq: College Algebra]

C. Physical Sciences (11-15 credit hours)

Chemistry – choose one of the following options:
• Chem 1320 College Chem I (4) Fall/Spring/Summer (preferred)
• Chem 1100 Atoms/Molecules (3) Fall/Spring/Summer AND Biochem 2110 The Living World (3) Spring
Earth Science – Choose one:
• Geology 1100 Principles of Geology (4) Fall/Spring/Summer
• Soils 2100 Intro to Soil Sci (3) Fall/Spring [prereq: Math 1100] AND
• Soils 2106 Soil Sci Lab (2) Fall/Spring [prereq: 3 hrs. Chem or concurrent enrollment in Soils 2100]

Choose one additional course:
• Physics 1210 College Physics (4) Fall/Spring/Summer [prereq: Math 1100 or equiv]
• Atm Sci 1050 Introduction to Meteorology (3) Fall/Spring/online
• Biochem 2110 The Living World (3) Spring (recommended for CWAM minor. Cannot duplicate from Chem sequence)

D. Social Sciences (9 credit hours minimum)

Economics - choose one:
• Ag Econ 2070 Environmental Economics and Policy (3) [Soph standing required] Spring (WI)
• Ag Econ 1041 Applied Microeconomics (3) Fall/Spring
American History or Gov’t - State requirement: Hist 1100, 1200, 1400, 2210, 2440; or PolSci 1100, 2100
Additional Social Sci elective (3) Fall/Spring/Summer (choices include classes in Soc, Rural Soc, Psych, Anthro, History)

E. Humanities (9 credit hours minimum) – Fine arts: art, music, theatre (3 hrs of performance credits allowed if on approved Gen Ed course list). Cultural arts: literature, philosophy, classical humanities, religion. Foreign language: min 12 hrs same language

II. Professional Core (42-44 credit hours)

NatR 1070 Ecology and Renewable Resources Management (3) Fall
Bio 1200 General Botany (5) Fall/Summer (Summer session is online only)
Introductory Biology - choose one:
• FW 1100 Introductory Zoology (5) Spring (strongly preferred)
• Bio 1500 Intro to Biological Systems (5) Fall/Spring [prereq: Math 1100]

Plant Taxonomy Course - choose one:
• Bio 3210 Plant Systematics (4) Spring [prereq: 1 sem. biology or botany (preferred)]
• Forestry 2151 Dendrology (4) Fall [prereq: Bio 1200]

FW 2100 Colloquium in Fisheries and Wildlife (1hr – S/U grading only) Fall
NatR 3110 Biometrics (3) Fall [prereq: 1 stat course]

Law/Policy Course – choose one:
• NatR 4353 Natural Resources Policy/Admin (3) Spring [prereq: Sr. standing or consent] (preferred)
• AgEcon 2070 Environmental Economics and policy (3) Spring [soph standing] (WI; cannot duplicate as Econ requirement in Pre-Professional Core Social Sciences block)
• PRT 3230 Intro Parks and Rec Services (3) Fall [soph standing] (WI)

Bio 3650 General Ecology (5) Fall [prereq: 10 hrs biology] (WI)
FW 3600 Introduction to Conservation Biology (3) Spring [prereq: Bio 3650 or For 4320]
FW 4500 Animal Population Dynamics (3) Spring [prereq: Math 1400 + Stat + Bio 3650 or For 4320]

Genetics Course - choose one:
• FW 2500 Intro Genetics/Evolution for Conserv (3) Spring [prereq: Bio 1500 or FW 1100 + Chem 1320 or 1100]
• Bio 2200 General Genetics (4) Fall/Spring [prereq: Bio 2200 + Chem 2100]
• AnSci 3213 Genetics of Agricultural Plants & Animals (3) Spring [prereq: Bio 1500 or FW 1100]
Animal Form and Function Course - choose one:
• MPP 3202 Elements of Physiology (5) Fall/Spring  [prereq: 5 hrs biology or consent]
• MPP 3333 Fundamentals of Human Physiology (3) Fall/Spring  [prereq: 5 hrs. biology or consent]
**PLUS** MPP 3337 Human Physiology Lab (2) Fall/Spring
• AnSci 3254 Physiology of Domestic Animals (3) Fall  [prereq: Bio 1500 or FW 1100 + Chem 1320 or 1100]
**PLUS** AnSci 3255 Physiology of Domestic Animals Lab (2) Spring  [prereq AnSci 3254]
• Bio 2300 Introduction to Cell Biology (4) Fall/Spring  [prereq: Bio 2200 + Chem 2100]

**III. Professional Tracks** (minimum 8 courses and 27 hours, at least one course must be a capstone)

- **Terrestrial emphasis**
  2 Terrestrial A + 2 Terrestrial B + any 2 from Aquatic Track + one additional course from Aquatic, Terrestrial, or Disciplinary electives + designated Capstone course.

- **Aquatic emphasis**
  2 Aquatic A + 2 Aquatic B + any 2 from Terrestrial Track + one additional course from Aquatic, Terrestrial, or Disciplinary electives + designated Capstone course.

**Senior Capstone** – choose one course from the following approved 4000-level courses: FW 4400; 4600; 4650; 4700; 4950 Research (accepted by contract only). This course should be taken in your final semester if possible. Course names are included below. **Cannot duplicate in the 7 Professional Track classes!**

**TERRESTRIAL TRACK**

**A. Science and Natural History**
FW 2600 Ornithology (4) Spring  [prereq: 5 hrs biology or consent]
FW 3660 Mammalogy (4) Spring  [prereq: 8 hrs biology; Jr standing]

Not more than one course from this group:
• Bio 3710 Entomology (3) Fall  [prereq: 5 hrs Bio 1500 or 1200 or FW 1100]
**PLUS**
  Bio 3715 Insect Diversity Lab (2) Fall  [prereq: Bio 3710, completed or concurrent]
• Bio 3360 Herpetology (4) Spring odd yrs  [prereq: 8 hrs biology]
• Bio 3260 Invertebrate Zoology (4) Spring  [prereq: Bio 1500 or FW 1100]  (WI)

**B. Management and Applications**
FW 2900 – Principles of Wildlife Management (4) Fall  [NatR 1070 + Intro Bio, Zool, or Botany]
FW 4220 – Human Dimensions of Fish and Wildlife Conservation (3) Fall odd  [prereq: 1 policy or management class]
FW 4600 – Ecosystem Management (4) Fall  [prereq: Bio 3650 or For 4320]  (WI)
FW 4650 – Wildlife Management Planning (3) Spring  [prereq: Bio 3650 or For 4320; FW 2900 recommended]
FW 4700 – Wildlife Research & Management Evaluation Methods (4) Spring  [prereq: Bio 3650 or For 4320; Stat]  (WI)
FW 4880 – Waterfowl Ecology and Management (3) Spring even years  [FW 2600 + Bio 3650 or For 4320]

**AQUATIC TRACK**

**A. Science and Natural History**
FW 2700 - Ichthyology (4) Spring  [prereq: 8 hrs biology or equiv]
FW 4100 - Limnology (4) Fall  [prereq: Sr. standing or Bio 3650 or For 4320]

Not more than one course from this group:
• Bio 3710 – Entomology (3) Fall  [prereq: Bio 1500 or 1200 or FW 1100]  AND
  Bio 3715 – Insect Diversity Lab (2) Fall  [prereq: Bio 3710, completed or concurrent]
• Bio 3260 – Invertebrate Zoology (4) Spring  [prereq: Bio 1500 or FW 1100]  (WI)
• Bio 3360 – Herpetology (4) Spring odd yrs  [prereq: 8 hrs biology]

**B. Management and Applications**
FW 3400 – Water Quality and Natural Resource Management (3) Spring  [prereq: Chem 1310 or 1100 or consent]
FW 3900 – Ecology of Fishes (3) Spring even yrs  [FW 1100 or Bio 1500]
FW 4300 – Fisheries Management (3) Fall  [prereq: Bio 3650 or For 4320 + Stat or consent]
FW 4400 – Techniques for Fisheries Management and Conservation (3) Fall  [prereq: Bio 3650 or For 4320 + Stat or NatR 3110 + FW 2700 or 4300]  (WI)

**DISCIPLINARY ELECTIVES**
FW 3090 – International Studies in Conservation (1-5)  [prereq: approved F&W Study Abroad Proposal]
FW 3500 – Wildlife Conservation of British Cities (2-4)  Time offered varies
FW 4200 – Urban Wildlife Management (3) Spring  [prereq: Bio 3650 or For 4320]  (WI)
FW 4800 – Environmental Toxicology (3) Spring odd years  [prereq: 10 hrs Bio and Chem 1320]
FW 4810 – Disease Ecology (3) Fall even years  [prereq: Chem 1320 + Bio 3650 or For 4320]
FW Topics – Subjects and credit vary from semester to semester
NatR 3125 – Introduction to GIS (3) Spring
Bio 4600 – Evolution (3) Fall/Spring  [Bio 2200 or instructor consent]
Bio 4640 – Behavioral Biology (3) Fall  [prereq: Bio 1500 + one upper-level Bio or Psych course]
Bio 4670 – Avian Ecology (3) Fall odd years  [prereq: Bio 3650 or For 4320 and FW 2600]

**IV. General Electives** (6-12 hours) Use these credits to broaden general education background and to add specialized courses important to your career goals.