<table>
<thead>
<tr>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisite?</th>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisite?</th>
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<tbody>
<tr>
<td>Tier 1 Nat Sci – CHEM 151</td>
<td>4</td>
<td>MATH 112 or placement</td>
<td>Tier 1 Nat Sci – CHEM 152</td>
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<td>CHEM 151</td>
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<tr>
<td>ENGL 101 or 109H</td>
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<td>ENGL 102</td>
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<td>Tier 1 Traditions and Cultures</td>
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<td></td>
<td>ECOL 182R and L General Biology Lecture and Lab</td>
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<tr>
<td>RNR 230R Field Botany lecture</td>
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<td>MATH 113, 122A/B, or 125 (Calculus)</td>
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<td>MATH 112 or placement test</td>
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<td>RNR 230L Field Botany lab</td>
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<td>Tier 1 Individuals and Societies</td>
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<td><strong>TOTAL</strong></td>
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<tr>
<td>Tier 2 Ind &amp; Soc – ECON 201a or ECON 200 (Economics)</td>
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<td>CHEM 241a, 243a or PHYS 102, 181 or SWES 200, 201</td>
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<td><strong>RNR 316 Natural Resources Ecology</strong></td>
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<td>ECOL 182R and L, RNR 230R</td>
<td>Tier 1 Traditions and Cultures</td>
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<td>MATH 163 or 263 (Statistics)</td>
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<td>ENGL 308, 313 or 340, ENVS 408 or 415, AGTM 422, SCI 401</td>
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<td><strong>RNR 200 Conservation of Natural Environments</strong></td>
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<td>MATH 112 or placement</td>
<td>COMM 119* or Technical Elective</td>
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<tr>
<td>MCB 181R and L General Biology Lecture and Lab</td>
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<td>MATH 112 or placement; CHEM 151</td>
<td><strong>RNR 384 Natural Resources Management Practices</strong></td>
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<td><strong>TOTAL</strong></td>
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<td>Genetics PLS 312 or ECOL 320</td>
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<td>MCB 181R and L; CHEM 151 and 152</td>
<td><strong>RNR 321 Ecological Surveys and Sampling</strong></td>
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<td>MATH 163 or 263</td>
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<td>Tier 2 Arts or Humanities Elect.</td>
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<td>ENVS 474 (Aq Plants) or 475 (Algae) or RAM 382 (Plant Communities)</td>
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<td>RNR 230R and L</td>
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<td>ECOL 482 Ichthyology (odd years in fall)</td>
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<td>RNR 316 recommended</td>
<td>WSM 468 Wildland Water Quality</td>
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<td>RNR 403 or RNR 417 or Technical Elective</td>
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<td>Tier 1 Individuals and Societies</td>
<td>Technical Elective</td>
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<td>WFSC 441 Limnology</td>
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<td>ECOL &quot;ology&quot; elective (e.g. Aquatic Entomology)</td>
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<td>RNR 316 recommended</td>
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<td>Technical Electives</td>
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<td>WFSC 456 Aquaculture or WFSC 444 (fall)</td>
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<td>WFSC 455 R and L Fisheries Management</td>
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<td><strong>RNR 480 Natural Resources Policy and Law</strong></td>
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<td>RNR 300</td>
<td><strong>TOTAL</strong></td>
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</tbody>
</table>

Diversity Emphasis: One general education course must have the non-Western Civilization, Gender, Race, Class, Ethnicity designation.

* Required for certification as a Fisheries Biologist by the American Fisheries Society. If you opt against certification, you must take a technical elective.

2nd semester language proficiency required.

Revised November 2015
Suggested Technical Electives

**Ecology/Zoology/Animal Health**
- WFSC 447 Wildlife Conservation Behavior
- ACBS 400A/B Animal Anatomy and Physiology
- ECOL 335 Evolution
- ECOL 473 Topics in Behavioral Ecology
- ECOL 487 Animal Behavior
- ECOL 403 Biology of Animal Parasites
- 3rd “Ology” of ECOL 483 (Herpet), 484 (Ornith), 485 (Mammal), 482 (Ichthy)
- ACBS 336A Applied Animal Nutrition
- ACBS 449 Diseases of Wildlife

**Fire Ecology and Natural Resources Management**
- RNR 448 Conservation Planning & Wildland Recreation
- RNR 355 Intro to Wildland Fire
- RNR 438 Wildland Fire Management
- RNR 496B Natural Resources Seminar (1-3)
- RNR 441A - Natural Resource Management in Native Communities

**Other Ecology/Conservation**
- ECOL 458 Ecosystem Ecology
- ECOL 438 Biogeography
- ECOL 406R Conservation Biology
- ECOL 464 - Sonoran Desert Discovery
- RNR 495A Study Abroad Namibia:

**Tools/Techniques/Internships**
- WFSC 430 Conservation Genetics
- WFSC 447 Wildlife Conservation Behavior
- EREC 217 Resources & Environmental Econ
- AREC 350 Econ, Ethics & Environmental Management
- AREC 375 Econ of Land & Water in the American West
- AREC 377 Econ of Environ. Resource Conservation
- POL 481 Environmental Policy
- PLG 472 - Environmental Land Use Planning

**Botany/Plant Science**
- RAM 436A Grazing Ecology and Management
- RAM 446 Management + Restoration of Wildland Vegetation
- RAM 456 Rangeland Inventory & Monitoring

**Marine Biology**
- ECOL 183 - Marine Biology
- GEOS 212 Introduction to Oceanography
- ENV 457 - Freshwater and Marine Algae
- ECOL 404R and L Biology of the Oceans (Fall)
- ECOL 450 Marine Discovery
- ECOL 496O - Galapagos Marine Ecology
- ECOL 463 - Ecology & Natural History of the Sonoran Desert & Gulf of California

**Pre-Veterinary (based on CSU requirements*)**
- CHEM 241A and 243A Organic Chemistry (4)
- MATH 263 (3)
- BIOC 384 Foundations in Biochemistry (3)
- PHYS 102 and 181 Physics (4)
- PLS 312 Genetics or ECOL 320 (4)

*Check each vet school for their specific requirements

Courses Required for Certification by the American Fisheries Society

Course Grade must be “C” or better (No Pass/Fail)

A. **Fisheries and Aquatic Sciences**: Four courses, 2 must be directly related to fisheries sciences (e.g., Ichthyology, Fishery Management, Aquatic Plants, Aquatic Entomology, Algae, Aquaculture, Limnology)
B. **Other Biological Sciences**: When added to the courses in section A, must total 30 semester hours (e.g., Basic Biology, Genetics, Anatomy, Disease, Nutrition, Botany, Zoology)
C. **Physical Sciences**: Must total 15 semester hours (e.g., Chemistry, Physics, Soils, Water Quality)
D. **Mathematics and Statistics**: Must include college algebra or calculus and 1 course in statistics. Must total 6 semester hours.
E. **Communications**: Must total 6 semester hours (e.g., Public Speaking, Technical Writing)