Course Name and Number: \_\_\_Conservation Natural Resources – ESRM V14 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_**\_\_Septembe 7, 2010\_\_\_\_\_**

Faculty Participating in Meeting: \_William Budke, Casey Mansfield\_\_\_\_\_\_\_\_

Student Learning Outcome: \_\_Develop skill in reasoning using scientific methods to determine best strategies for managing Earth’s natural resources and how to manage for sustainability of resources with constrains of resource base.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| **Student outcomes: At the end of this course, the student should be able to:** | | | **Assessment** | |
| Apply principles of scientific reasoning and scientific method (observation of natural physical phenomena), development of conceptual models for Earth’s hydrosphere, geosphere, biosphere, atmosphere, and pedosphere consistent with ecological principles and selected biomes. | | | **Successful student progression through assigned readings using principles of scientific reasoning and the scientific method**  **Q & A , exams** | |
| Develop basic conceptual understanding of Earth’s natural resources and issues pertaining to their management, conservation, and preservation, including renewable and non-renewable resources. | | | **Successful student progression through assigned readings using principles of scientific reasoning and the scientific method**  **Q & A , exams** | |
| Defend a logical hypothesis to explain observed phenomenon | | | **Write and term project paper and present report to class.**  **Question & answer**  **Examinations** | |
| **Component** | | **A / Excellent** | **B / Good** | | **C / Satisfactory** | | **D / Below Satisfactory** |
| Apply principles of scientific reasoning and the scientific method (observation of natural physical phenomena, development of cause/effect hypothesis, development of theory and mathematical model) to understand physical , chemical, and biological functioning of Earth’s ecosystems and resources . | | Assess student implementation through question & answer, working group discussion, exams, and tutorial problems  (A =100%-90%) | Assess student implementation through question & answer, working group discussion, exams, and tutorial problems  (B = 89%-80%) | | Assess student implementation through question & answer, working group discussion, exams, and tutorial problems  (C = 79%-65%) | | Assess student implementation through question & answer, working group discussion, exams, and tutorial problems  (D < 55%) |
| Approach problems by choosing from variety of scientific techniques | | Assess student implementation through question & answer, working group discussion, exams, and tutorial problems  (A =100%-90%) | Assess student implementation through question & answer, working group discussion, exams, and tutorial problems  (B = 89%-80%) | | Assess student implementation through question & answer, working group discussion, exams, and tutorial problems  (C = 79%-65%) | | Assess student implementation through question & answer, working group discussion, exams, and tutorial problems  (D < 55%) |
| Defend a logical hypothesis to explain observed phenomenon | | Assess special project assignments through graded classroom presentation  (A =100%-90%) | Assess special project assignments through graded classroom presentation  (B = 89%-80%) | | Assess special project assignments through graded classroom presentation  (B = 89%-80%) | | Assess special project assignments through graded classroom presentation  (D < 55%) |
| Recognize a problem and devise and implement a plan of action | | Assess problem solving of homework assignments by classroom participation and written solution of problems  (A =100%-90%) | Assess problem solving of homework assignments by classroom participation and written solution of problems  (B = 89%-80%) | | Assess problem solving of homework assignments by classroom participation and written solution of problems  (B = 89%-80%) | | Assess problem solving of homework assignments by classroom participation and written solution of problems  (D < 55%) |
| Component | | A / Excellent | B / Good | | C / Satisfactory | | D / Below Satisfactory |
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