OCONINO COMMUNITY COLLEGE
COURSE OUTLINE

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Revised by: Bryan Bates	April 17, 1997
General Education Outcomes reviewed by: Bryan Bates	March 23, 2001
Revised by: Maxie Inigo	Fall 2003
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Status: Permanent	
Effective: Fall 2015	

A. Identification:
   1. Subject Area: Biology (BIO)
   2. Course Number: 109
   3. Course Title: Natural History of the Southwest
   4. Credit Hours: 4
   5. Course Description: Based on the life zone concept, an examination of the geologic history and ecological history of the Southwest. Emphasis is on the identification and adaptations of biotic populations. Involves field trips. Prerequisite: ENG 100 and MAT 091 or placement beyond prerequisite courses. General Education: Physical and Biological Sciences. Three lecture. Three lab.

B. Course Goals:
   Students will systematically identify common flora and fauna, adaptations which allow these organisms to survive their life zone and common techniques used in the study of these organisms. Students will learn to identify geological strata based upon its mineral composition, fossils, and relative time index. Students will compile their research and findings into a portfolio or similar such that they will create their own natural history of their bio-region.

C. Course Outcomes: Students will:
   1. use and explain sampling techniques developed by ecologists;
   2. diagram the climatic conditions of and biota contained within each of the examined life zones;
   3. identify in the field: fossils, plants, animals, and geologic structures;
   4. document the evolutionary history of key species within each life zone studied;
   5. illustrate, identify and explain the geology process involved in regional strata;
   6. describe orally and in writing the environment of deposition for each identified strata;
   7. document and interpret field data. Translate field notes and data into a synthesis manual integrating course materials;
   8. distinguish and apply biological and ecological concepts to species composition, community structure and energy-flow relationships;
   9. and develop ecological concepts for use in future field and lab studies.

D. Course Outcomes Assessment will include:
   1. student created natural history booklet;
   2. and description of adaptations, ecological and geological processes.

E. Course Content will include:
   1. populations and ecology sampling techniques;
   2. life zones and characteristic biota;
   3. climatic and geologic influences on biota;
   4. identification, description and mapping of regional strata;
   5. identification and ecology of regional flora and fauna;
   6. prehistoric and recent human history including impacts on biota;
   7. student creation of a natural history booklet for continued use and study;
   8. and evolutionary strategies and processes which have allowed organisms to adapt to their environment