

**Eco-Informatics Deschutes River Module**  
**Steve Taylor – Western Oregon University**

**Learning Outcomes and Objectives**

- (1) To engage team building in the context of outdoor adventure and experiential education
- (2) To acquire knowledge of the regional geologic, hydrologic, and geomorphic setting of western Oregon
- (3) To apply spatial and temporal scaling concepts to watershed systems
- (4) To develop skills in field-based observation, data collection, analysis, and hypothesis testing
- (5) To gain experience with techniques of landscape analysis and interpretation of the geologic record

**Course Activities and Student Assessment**

- I. Pre-Trip Reading Assignment (distributed arrival week)
  - a. Review questions due before start of field trip (during arrival week)
- II. Pre-Trip Orientation Meeting (OSU campus)
  - a. Group introductions
  - b. Fieldtrip orientation and logistical planning (“what to expect”)
  - c. Introduction to Deschutes River Module Content
    - i. Regional physiographic setting; field trip itinerary
    - ii. Review / introduction: fundamental concepts of geology, geomorphology, and watershed systems
- III. Field Trip Content
  - a. Regional physiographic setting of western Oregon-Cascades-central Oregon (tectonic setting, topography, climate)
  - b. Regional geology, geomorphology and hydrology of central Oregon / Deschutes Basin
  - c. Introduction to geologic observation and landscape analysis
  - d. Fundamental principles of hydrology and geomorphology
  - e. Fundamentals of Oregon fisheries, habitat, watershed assessment, and river restoration
- IV. Active Learning Assignments (i.e. 3-4 “lab assignments” completed in field; TBD)
  - a. Field observation and hypothesis development
  - b. Map reading and cartographic analysis
  - c. Hydrogeomorphic data analysis
  - d. Conceptual modeling
- V. Field Trip Reflection Paper (3-5 page double spaced)
  - a. “take-home” exam questions
  - b. open-ended reflection

Required materials: field guide (provided), calculator, writing/drawing implements, rulers/engineers scale, protractor, note book, camera, waterproof ziplocks / small drybags

Deschutes River Module student deliverables: (1) pre-trip reading questions, (2) active learning assignments, (3) post-trip reflection paper