FIELD TECHNIQUES IN ENVIRONMENTAL SCIENCE AND RANGE MANAGEMENT

COURSE INFORMATION:

Title: Field Techniques in Environmental Science and Range Management

Department/Number: HLRM 201 (ESCI 201) Credits: 2

Prerequisites: none

Recommendations: HLRM/ESCI 101 or 100 level biology, chemistry or geology

Location: Northwest Campus or Bristol Bay Campus

Meeting Dates/Time: 7 day intensive/Summer 2008

INSTRUCTOR INFORMATION:

TODD RADENBAUGH
Assistant Professor, Envir Science
UAF Bristol Bay Campus
PO Box 1070
Dillingham, AK 99576
907-842-4668
bftar@uaf.edu

LOCAL CONTACT INFO:

UAF Northwest Campus
Pouch 400
Nome, AK 99762
907-443-2201
800-478-2202

COURSE READINGS/MATERIALS:

Course Textbook:

Author: Publisher:

Supplementary Readings (Indicate whether required or recommended):

Students will be provided will course-related handouts and a field notebook prior to the start of the course.
Any Supplies Required: Students should bring appropriate clothing, footwear, and a daypack for performing work outdoors in possible inclement weather. A detailed list will be mailed to students a few months prior to the course.

**COURSE DESCRIPTION:**

This course provides hands-on instruction in interdisciplinary field and laboratory techniques for environmental sciences and range management. It will introduce the methods for sampling and studying environmental parameters. Students will design a research project to collect, analyze, and interpret environmental data.

**COURSE GOALS:**

General Description of Goals: Upon completion of this course, students will:
- Understand the concepts of interdisciplinary field and laboratory techniques for ecological sciences
- Observe multiple methods for environmental sampling
- Design a research project based on demonstrated ecological sampling techniques
- Collect data for research project
- Analyze data using laboratory equipment
- Collect data for use in HLRM 205//ESCI 205 course

Student Learning Outcomes/Objectives (Provide Examples): Students will demonstrate an understanding of field research techniques by completing the following:
- Use the scientific method and critical thinking to understand environmental problems and discoveries
- Collect and interpret quantitative scientific data
- Conduct multiple environmental and ecological sampling methods
- Demonstrate field safety procedures
- Operate scientific equipment in field conditions

**INSTRUCTIONAL METHODS:**

Summer Intensive – face to face student exercises i.e., field and laboratory data collection and analysis
SYLLABUS / COURSE CALENDAR:

Day 1
- Course logistics
- Introduction to field research – readings discussion
- Field safety
- Transect sampling demonstrations

Day 2
- Vegetative community analysis demonstrations
- Animal community analysis demonstrations
- Benthic stream sampling demonstrations
- Ship-based sampling demonstration and data collection

Day 3
- Review of field sampling techniques
- Student project discussion
- Project approval by instructor
- Student field data collection preparation

Day 4
- Student field data collections

Day 5
- Introduction to laboratory analysis techniques
- Demonstration of laboratory analysis equipment and instrumentation
- Student laboratory analysis of field data collection preparations

Day 6
- Student laboratory analysis of field data collections

Day 7
- Complete laboratory analysis of field data collections
- Review of course products
- Discussion of use of data in HLRM 205/ESCI 205

COURSE POLICIES:

Participants will read assigned materials, contribute to the class discussions, and complete field and laboratory assignments. The web sites of reference and reading
materials will be reviewed before the class so participants can share their learning and insights during the course.

Due to the nature of this course, a very large component of the class will focus on field data collection and laboratory analysis. Hands-on exercises and projects reinforce learning and provide additional information not available in lectures. Thus, the field data collections and lab components are essential to a complete understanding of field sciences. Field data collections and laboratory analysis also provide an opportunity for you to make your own interpretations of environmental parameters using practiced techniques.

**EVALUATION:**

*Grades* in this course will be determined as follows:
25% Class Participation
75% Field projects

The grading scale in this course will be determined as follows:
A = 90%-100%, B = 80%-89%, C = 70%-79%, D = 60%-69%, F = 0%-59%

**SUPPORT SERVICES:**

Barbara Oleson, Student Services Program Manager, 443-8402 or Bob Metcalf, Records & Registration, 443-8403.

**DISABILITIES SERVICES:**

The Office of Disability Services implements the Americans with Disabilities Act (ADA), and insures that UAF students have equal access to the campus and course materials. State that you will work with the Office of Disabilities Services (203 WHIT-7043) to provide reasonable accommodation to students with disabilities:

**DISABILITIES SERVICES TEXT FOR DISTANCE FACULTY SYLLABI**

(Approved by Mary Matthews, UAF Disability Services, June 16, 2004)

UAF DISABILITY SERVICES FOR DISTANCE STUDENTS

UAF has a Disability Services office that operates in conjunction with the College of Rural Alaska's (CRA) campuses and UAF’s Center for Distance Education (CDE). Disability Services, a part of UAF’s Center for Health and Counseling,
provides academic accommodations to enrolled students who are identified as being eligible for these services.

If you believe you are eligible, please visit [http://www.uaf.edu/cht/disability.html](http://www.uaf.edu/cht/disability.html) on the web or contact a student affairs staff person at your nearest local campus. You can also contact Disability Services on the Fairbanks Campus at (907) 474-7043, fyds@uaf.edu.