COURSE INFORMATION:

Title: Research Field Logistics

Department/Number: HLRM 130  Credits: 2

Prerequisites: None

Location: Northwest Campus Science Room, Northern Alaska Career and Technical Center, and the Seward Peninsula OR Bristol Bay Campus

Meeting Dates/Time: 6 days, Summer 2009

INSTRUCTOR INFORMATION:

HLRM FACULTY
UAF Northwest Campus
Pouch 400
Nome, AK 99762

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 with a booklet of reading materials.
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:**

Learn the skills, techniques, and equipment used in remote scientific fieldwork in Alaska. Course includes methods for processing and storing animal/plant tissue samples, orienteering, GPS, wilderness first aid, arctic survival, bear safety, aviation safety, as well as ATV, boat, and snowmachine operation, maintenance and repair.

**COURSE GOALS:**

General Description of Goals: Students will be able to successfully perform field work in remote Alaska which supports scientific research by being able to be self-sufficient and knowledgeable in backcountry travel, camping skills and equipment, basic wilderness first aid, mechanized vehicle operation, maintenance and repair, and arctic survival skills.

Student Learning Outcomes/Objectives (Provide Examples):

Knowledge and comprehension outcomes/objectives:
- Identify and explain the features of a map, compass and GPS
- Describe the various maps units of measure (lat/long, UTM)
- Explain how to prepare for a remote field trip
- List personal and basic equipment needed for a field camp
- Recognize basic shelter, food and water needs
- Identify safety measures to reduce probability of survival situations
- Define body reactions to stress, cold and heat
- List items for a survival and first aid kit
- Describe bear behavior and proper responses to various field scenarios
- Explain basic principles of boat, snowmachine and 4-wheeler engines

Analysis and application outcomes/objectives:
- Demonstrate how to read a map in a field setting
- Operate a compass and GPS
- Organize and assemble gear for a remote field trip
- Organize and assemble scientific equipment for remote storage, processing and travel
- Practice setting up a field camp and cooking with an emphasis on safety
- Apply basic wilderness first aid skills
- Demonstrate knot tying skills
• Distinguish between grizzly and black bears and appropriate responses to various field scenarios
• Demonstrate appropriate and safe behaviors around boats and water
• Demonstrate appropriate and safe behaviors around aviation equipment
• Operation of small engines for remote field work
• Examine small engines for maintenance and repair needs

Synthesis and evaluation outcomes/objectives:
• Choose the appropriate navigation method depending on the field scenario
• Plan a course of travel using a map and GPS
• Organize, plan and prepare for a remote field trip in Alaska which support scientific research goals to include animal/plant tissue processing, storage and transport
• Evaluate backcountry field locations for safe work and/or camp sites
• Arrange for contacting rescue/aid in a survival situation
• Assess small engines for repair and/or maintenance needs

INSTRUCTIONAL METHODS:
This course will be taught using classroom face-to-face lecture, classroom exercises and demonstrations, and outdoor field lecture and hands-on demonstrations. In addition to the regular course instructors, guest presenters will be scheduled throughout the week to enhance course topics and broaden student perspective.

SYLLABUS / COURSE CALENDAR:

Day 1: Orientation and Navigation Skills

Morning, 9:00 AM – 12:00 PM
- Map types, scales and distance
- Map orientation and magnetic variation
- Latitude and longitude
- Understanding the Universal Transverse Mercator Grid system
- Compass as a tool
- Effective use of compasses in navigation
- Maintaining a course of travel under field conditions
- Using contour intervals for route planning
- GPS use and navigation techniques
Afternoon, 1:00 – 5:00 PM
- Combining map and compass use in outdoor field exercise
- GPS use and navigation outdoor field exercise

Day 2: Preparing for Remote Field Work

Morning, 9:00 AM – 12:00 PM
- Scientific research trip planning – goals and objectives, other essentials for a successful trip
- Field work equipment preparation – dos and don’ts
- Field camp equipment (including basic shelter, food and water needs)
- Personal equipment (including Arctic and protective clothing)
- Methods for processing and storing plant/animal tissue samples in camp

Afternoon, 1:00 – 5:00 PM
- Field exercise - Remote field camp set-up and operation scenario (In this exercise students will pack gear and travel to a location and set-up a remote field camp and prepare a meal. Students will also process and store animal/plant tissues samples. Emphasis will be placed on safety, location, the operation of equipment (camping and scientific), and cooking in bear country). Case studies and various scenarios for students to act out and problem solve will be presented.

Day 3: Wilderness Survival Skills I

Morning, 9:00 AM – 12:00 PM
- Identify safety measures to reduce probability of survival situations
- Characteristics of survivors
- Medical emergencies, field stress, body stress reactions
- Understanding body heat production and retention
- Insulation principles
- Cold injuries – prevention, recognition, treatment

Afternoon, 1:00 – 5:00 PM
- Basic wilderness first aid and treatments for basic trauma with scenarios
- Arctic land survival field skills: principles of improvising, fires sources, food sources, field shelters, techniques and procedures for contacting rescue/aid including emergency signaling and communication
Day 4: Wilderness Survival Skills II

Morning, 9:00 AM – 12:00 PM
- Building functional first aid and survival kits
- Ropes and cords - knot tying, attachment and lashing techniques
- Bear behavior, safety and defense

Afternoon, 1:00 – 5:00 PM
- Bear safety – cont’d
- Boat and water safety
- Aviation safety

Day 5: Mechanized Vehicle Repair and Maintenance

Morning, 9:00 AM – 12:00 PM @ NACTEC
- Basic principles of engines
- ATV basic operation, maintenance and repair

Afternoon, 1:00 – 5:00 PM @ NACTEC
- Snowmachine basic operation, maintenance and repair
- Boat motor basic operation, maintenance and repair

Day 6: Remote Field Camp Simulation/Scenarios

Morning, 9:00 AM – 12:00 PM
- Field practical - Students will be presented with six (or more) field scenarios or tasks which they must complete by using knowledge and skills developed during the course.

Afternoon, 1:00 – 3:00 PM
- Discussion and de-briefing of the field practical
- Course evaluations
- Wrap-up

COURSE POLICIES:

Students are expected to attend and participate in all classroom and field trips during the week. Students are expected to arrive on time. Class participation is encouraged and important for learning the techniques and methods covered throughout the week.
Students staying in the NACTEC dormitory are expected to follow all dorm rules and regulations. Failure to comply will be reflected in your final evaluation.

EVALUATION:

The grading system for the course will be Pass/Fail. The student’s completion and participation of in-class tasks and case studies will result in a passing grade. Unexcused absences, excessive tardiness, and failure to participate and complete in-class assignments may result in a failing grade.

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 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, fydso@uaf.edu.