RTM 151H Caving (2 units)
Department of Recreation and Tourism Management
California State University Northridge

Fall 2011
Moved from Sequoia 102 to
Redwood Hall 151 – Saturdays 1:00-2:50 pm

First Session is September 27
Class Meetings on August 27, Sept 17, plus online sessions.
Plus Field Class September 23-25, 2011 (all day)

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COURSE DESCRIPTION:
Introduction to the safe exploration of caves and the underground environment, including cave formations and features, techniques and special hazards. Emphasis on safety techniques for horizontal and vertical caves, environmental awareness, and skill development. Arranged field trips are required.

COURSE OBJECTIVES:
Departmental Student Learning Outcome #1:
"Students will demonstrate critical thinking including analysis, synthesis, and evaluation in the fields of play, leisure, recreation, parks, and/or tourism through a variety of pedagogies."

At the conclusion of the course the students will be able to:

1. Gain a greater understanding of and appreciation for the natural environment demonstrated through minimum impact camping and conservation techniques.

2. Develop the ability to plan, organize and safely participate in a backcountry camping experience.

3. Develop navigational skills and safe backcountry travel techniques.

4. Apply safety techniques for group exploration of horizontal caves

5. Apply safety techniques for ascending and descending in vertical caves

6. Evaluate the environment and appropriately manage risks

7. Appropriately navigate a group in cave environments

8. Synthesize information related to group impacts on underground environments and the Leave No Trace philosophy

9. Describe the clothing and equipment necessary to safely navigate caves

10. Demonstrate the basic skills required for safe single-rope ascending and descending

COURSE CONTENT:

I. Introduction
- A. Planning and information gathering
- B. Preparation: mental and physical
- C. General requirements of resource management agencies

II. Regulation of body temperatures
- A. Heat transfer mechanisms
- B. Heat production
- C. Insulations principles and materials
- D. The layering system

III. Cold emergencies
- A. Hypothermia: symptoms, treatment
- B. Frostbite: symptoms, treatment
- C. Prevention

IV. Water and heat emergencies
- A. Bodily requirements for hydration
- B. Dehydration and heat exhaustion
- C. Hyperthermia: symptoms, treatment
- D. Water: sources and purification

V. Altitude
- A. Acute Mountain Sickness (AMS)
- B. High Altitude Pulmonary Edema (HAPE)
- C. High Altitude Cerebral Edema (HACE)
- D. Acclimatization and prevention

VI. Environmental considerations
- A. Minimal impact philosophy
- B. Ecosystems and environment sensitivity
- C. Animals and human visitors
- D. Minimum impact camping and travel techniques

VII. Environmental hazards
- A. Weather
- B. Snakes and reptiles
- C. Mammals
- D. Ticks, scorpions, spiders
- E. Fires

VIII. Backcountry travel techniques
- A. Navigation with map and compass
- B. Hiking techniques: conserving energy
- C. Crossing water hazards
- D. Safety

IX. Food in the Backcountry
- A. Nutritional and caloric requirements
- B. Menu suggestions: freeze dried/ dehydrated
- C. Cooking techniques
- D. Preparation, packaging and storage

X. Basic first aid
- A. Safety: judgement
- B. True emergencies: bleeding & breathing

XI. Short term survival
- A. Priorities
- B. Shelters
- C. Water & Food

XII. Introduction to caving
- a. History of cave exploration
- b. History of caving in N. America
- c. Spleotherms and cave formation
- d. Scientific and recreational values

XIII. Cave formation and morphology
- a. limestone cave development
- b. limestone cave features
- c. Glacial Caves
- d. Lava tubes
- e. Miscellaneous cave types

XIV. Specialized equipment
- a. Helmets
- b. Lighting
- c. Clothing
- d. Technical gear

XV. Horizontal exploration techniques
- a. Caving maps
- b. Climbing techniques

XVI. Vertical exploration techniques
- a. Rappelling
- b. Ascending techniques
- c. Traverses

XVII. Safety issues
- a. Lightning
- b. “bad air” dangers
- c. Immersion hypothermia
- d. First aid and rescue operations

METHODS OF INSTRUCTION:

Students will receive lecture material, participate in class discussions, take exams and have direct experience in development of caving skill competencies.

METHODS OF ASSESSMENT/EVALUATION:

Departmental Student Learning Outcome #1:

"Students will demonstrate critical thinking including analysis, synthesis, and evaluation in the fields of play, leisure, recreation, parks, and/or tourism through a variety of pedagogies."

Assessment Tools:

a. Embedded questions on final written exam
b. Ability competency testing per certification standards where applicable
c. Students are evaluated on mastery of knowledge, basic skills, and application of critical thinking skills by demonstrating good judgment.

Evaluation Tools:

a. Examination: 50%
b. Active Participation and Experiential Learning: 50%

Text: Reading Packet.

Class Field Trip: The specific weekend for the class trip is found on the first page of this syllabus. Because the trip encompasses over 75% of the time in this class, attendance on this trip is **mandatory**. Make sure you are available from Friday morning to Sunday afternoon of the weekend corresponding to your trip. If you have a commitment during the weekend trip, you will have to drop the class. Unfortunately, there is no way around this. **BE AWARE OF WHICH SECTION YOU HAVE REGISTERED FOR, AND MAKE SURE THAT WEEKEND FITS YOUR SCHEDULE!**

OTHER FIELD CLASS INFORMATION AND MISC CLASS POLICIES:

A. Grading Criteria

1. The CSUN criteria for grading will be strictly followed including that an "A" represents "Outstanding" work and "an innovative application of the subject matter." Refer to CSUN catalogue for additional details. Because class participation is such a significant part of the grade, attendance will be taken and failure to attend all class sessions will compromise your grade. Failure to attend the weekend field class will result in a failing grade for the class.

2. An Incomplete ("I") is assigned only as specified by Instructor and upon consultation and approval of the Instructor. Incompletes are normally not permitted.

3. For Credit/No Credit grading, student must be doing passing work to receive "credit." Credit/No Credit grading option must be requested on SOLAR by the appropriate deadline.

B. **Students may not attend the field trip without review of the field trip information by the instructor prior to the field class. You must attend that class session.** In addition to being adequately prepared for the environmental demands of the field setting, students are required to complete a release form and insurance verification form PRIOR to the field class session.

C. Student Discipline
Inappropriate conduct by students (such as consuming alcohol on field trip and/or any other safety violation) is subject to discipline as provided in Sections 41301 through 41304 of Title 5, California Administrative Code. Refer to CSUN catalog for further details. The consequence for use of alcohol or illegal drugs in a field class is a failing grade for the class.

D. Field Trip Advanced Information about Equipment and Student Costs

More detailed information will be provided during the class to indicate what to bring, maps, and so forth for the required field class.

Travel: Students are encouraged to car pool for financial and environmental reasons. Student choices to car pool are the full responsibility of the students. PROOF OF CAR INSURANCE (if driving) is required by the university. Students should bring proof of insurance coverage to the pre-field class meeting as well as vehicle plate numbers. Students can download the form provided on-line and bring that form to the pre-field class meeting.

Students must meet the instructor at the designated field site location identified in the pre-trip information. If students are late they will not attempt to locate the rest of the class in the wilderness nor are students allowed to depart from the field class experience early.

Detailed explanation of any personal gear necessary for the field experience will be reviewed in class and any university issued gear will be provided. Common personal gear for the field class could include:

Rain Gear/ Shoes/ Food/ Water Bottles
Clothes:
- Loose-fitting & flexible pants and shirts (wind pants and wind breaker)
- Warm clothes (pile or wool sweater/ wind gear).

Sunscreen/ Sun glasses
Flashlights and/or headlamps (3 light sources)
Knee pads

D. Expenses the student can expect:
a. Gas cost will vary depending on vehicle and current prices. Round trip travel to the field site may be 280 miles. Costs will be reduced if shared with car pool.
b. Campsite fees and entrance fees = could be $20 per car depending on the final field class location and if you do not ride share that becomes an individual cost.
c. Food = students provide their own food for field trips so cost varies according to your taste.
d. Equipment rentals = ($5.00 cleaning fee). CSUN can provide backpack, sleeping bag and ensolite pad through AS Outdoors rental shop.

e. Students may choose to provide their own backpack, sleeping bag, and other assorted camping gear though there is no obligation to provide these as CSUN can provide those for you.

The Syllabus: Time has been spent writing this syllabus to include essential class information. Please read it rather than sending an email asking questions that are easily answered in this document. Also check for other key documents posted at the class website. Then if you have questions please ask the instructor in class and/or send an email.

Update : August 2011