2008
Karst Field Studies Program

Hoffman Environmental Research Institute through its Center for Cave and Karst Studies and in cooperation with Mammoth Cave International Center for Science and Learning, and Western Kentucky University, offers a series of week-long field classes focusing on cave and karst science and caving. Though some of the classes do require previous subject knowledge, others are designed for individuals who are purely interested in caves and caving.

The classes cover topics such as Karst Geology and Geomorphology, Speleology, Exploration of the Mammoth Cave, Karst Hydrology in urban areas, Cave Surveying and Cartography and GIS, Cave Ecology, and Cave and Resource Management.

GENERAL INFORMATION:

Participants will need an adventurous spirit and good physical conditioning to get the maximum benefit from these courses. Past participants have included undergraduate and graduate students, cavers, cave guides, geologists, hydrologists, engineers, teachers and college professors, as well as individuals desiring an exciting and educational vacation experience. All participants must be high school graduates and in good physical condition. This program also requires all participants to carry medical insurance coverage.

Course Format: Professors typically lecture in the mornings with cave and surface trips scheduled for the afternoons. Special talks, slide shows, and trips into the cave are often scheduled after dinner. Activities may include: 1) all-day trips into Mammoth Cave, 2) surface trips into the Park and the surrounding area, and 3) laboratory and various field exercises.

Equipment: Detailed information concerning equipment will be sent in an informational packet upon registration.

Accommodations/Locations: The headquarters for courses taught at Mammoth Cave National Park is the International Center for Science and Learning at Hamilton Valley in Cave City. Participants may choose to stay in the group bunkrooms or camp on the research center grounds. Accommodations are also available at local hotels in Cave City and Park City, Kentucky, but participants must make their own reservations or to register, please email us at lisa.haynes@wku.edu

2008 Course Offerings & Fees:

The Following courses are offered:

Cave Ecology (Mammoth Cave)
Karst Geomorphology (Mammoth Cave)
Exploration of Mammoth Cave (Mammoth Cave)
Speleology (Mammoth Cave)
Cave Surveying and Cartography & GIS (Mammoth Cave)
Cave and Karst Resource Management (Sequoia Kings Canyon National Park, California)
Karst Hydrology (Bowling Green, Kentucky)

For Credit Classes:

	KY Resident	Non-resident
Undergraduate	$801	$1935
Graduate	$1053	$1152
Lab Fee	+$100	+$100

Tuition is paid directly to the WKU Bursar's Office. Contact the Registrar's office for Registering for classes for credit and payment options. There is also a $100 Lab Fee for Tuition students paid directly to The Center for Cave and Karst Studies

Workshops (except for Karst Hydrology)

Up to April 1, 2008 - $350.00
After April 1, 2008 - $425.00

Karst Hydrology: $895.00

All courses taken as a workshop must pay a $100 Deposit to register which will be taken off of the balance. The Workshop Fees and the $100 Deposit are to be paid directly to The Center for Cave and Karst Studies.

Online Registration and Payment is available at http://caveandkarst.wku.edu
CEU Credit is also available.
For more information contact the CCKS at 270-745-3252

2008 KARST FIELD STUDIES PROGRAM

Sponsored by
The Center for Cave and Karst Studies
Hoffman Environmental Research Institute
and Mammoth Cave National Park International Center for Science and Learning

June 1-21, 2008

Courses at Mammoth Cave, Bowling Green and California

Center for Cave and Karst Studies
Hoffman Environmental Research Institute

2008
Karst Field Studies Program

Cave Ecology
June 1-7, 2008, Mammoth Cave, KY
Dr. Horton Hobbs III

Caves and other subterranean voids are unique in that they lack light and, therefore, most are not capable of producing food. Consequently, these dark, energy-poor, extreme environments impose a suite of restrictions on organisms cave fauna as well as the evolution of cave-adapted organisms. We shall examine the cave productive surface world on the dark, consumptive cave environment. Morning sessions will be interactive lectures and afternoons and most evenings will be spent in the field, observing surface and subsurface ecosystems of the Mammoth Cave System. Small group miniprojects will be conducted utilizing the scientific method to test hypotheses related to the ecology of caves. A "symposium" will be presented. Participants should be in good physical condition and prepared for strenuous activity above and below ground throughout the week.

Registration: Graduate, Undergraduate, or Workshop

Karst Geomorphology
June 8-14, 2008, Mammoth Cave, KY
Dr. Darryl Granger with Joe Meiman

This course will be an intensive study of karst landscapes and will emphasize current thinking on the processes at work shaping them. The Mammoth Cave System serves as natural laboratory for one of the great karst landscapes of the world. Participants will be in a unique position to gain a deep appreciation of these fantastic landscapes through a combination of field and classroom study. Because caves are a major element of the karst landscapes, both in terms of process and of form, their origin and morphology will be a major emphasis. Accordingly, a significant part of the week will be spent underground in the Mammoth Cave System as well as other caves. At least one previous course in geology is required, although appropriate concepts will be reviewed. The course will involve strenuous cave trips and hiking; therefore, participants must be in excellent physical condition.

Registration: Graduate, Undergraduate, or Workshop

Exploration of Mammoth Cave
June 8-14, 2008, Mammoth Cave, KY
Dr. Stanley D. Sides

This course is an intensive study of the discovery, exploration and development of the caves and karst features of the Mammoth Cave region that resulted in integration of the caves into the world's longest cave system. The forces that stimulated exploration, such as saltpeter mining, regional commercialization of show caves, national park development, and scientific research are examined. Illustrated lectures, handouts, and maps are used to promote understanding of the caves prior to daily field trips. Many underground trips follow tourist trails closed long ago to the public, while other trips require strenuous walking and crawling in undeveloped passages on trips lasting 6-8 hours. This year the course will emphasize recent research on the history of the many regional show caves that competed with Mammoth Cave after the end of the Civil War. Usually the class repeats of the connection routes made by previous explorers between one entrance and another in Mammoth Cave. Participants must be in good physical condition.

Registration: Undergraduate, or Workshop

Karst Hydrology
June 16-21, 2008, Bowling Green, KY
Dr. William White & Dr. Nicholas Crawford

The hydrology of karst terrains is taught from the perspective of integrated drainage basins. Discussion addresses karst landscapes, the hydrogeology of karst aquifers, caves and their importance as records of paleohydrology, karst water chemistry and its use in the analysis of flow systems, water balance, and the physical environmental problems in karst. The course deals with groundwater monitoring techniques, groundwater tracers, and the movement of contaminants through karst aquifers. Field exercises include qualitative and quantitative dye trace tests, and as techniques for locating caves for drilling monitoring wells in karst aquifers. A primary objective of this course is to provide "state-of -the-practice" instruction and "hands-on" experience for dealing with groundwater problems of karst regions. Most participants in this course are professional geologists and engineers employed by environmental consulting firms or government agencies who take the course as a workshop.
However, undergraduate and graduate students also take the course for credit.

Registration: Graduate, Undergraduate, or Workshop

Speleology
June 15-21, 2008, Mammoth Cave, KY
Roger Brucker

Not just an introductory caving course, Speleology delves into the basics in cave science that lead to insight and understanding essential in making discoveries. It is an experience in which extensive cave trips tie together hydrology, geology, biology, and ecology by the use of discovery techniques such as exploration and cave surveying. These tools and techniques such as used by the Cave Research Foundation in the exploration of the world's longest cave, allow participants to understand caves anywhere and to make significant discoveries of their own. Field trips are strenuous, involving long trips into rarely visited portions of the cave system, including making connections between caves as described in The Longest Cave. Participants must be in excellent physical condition, however, no prior caving experience is required.

Registration: Undergraduate, or Workshop

Cave Surveying and Cartography & GIS
June 15-21, 2008, Mammoth Cave, KY
Pat Kambesis

Cave maps and inventories are fundamental to the understanding of cave and karst environments. This course will focus on in-cave data collection (with an emphasis on sketching), cave resource inventories, constructing survey data/ inventory databases, creating maps and transforming the data maps into GIS format. Techniques for collecting cave survey and inventory databases will be examined with emphasis on obtaining the most useful data in the field. Surface geophysical techniques pertinent to locating and mapping caves

Registration: Graduate, Undergraduate, or Workshop

Cave and Karst Resource Management
June 15-21, 2008, California
Joel Despain and Dr. Rick Toomey

This intensive course includes practical and hands-on instruction concerning cave management practices. AKA, 'cave specialist 101." It is designed for state and federal land managers, private preserve managers, and members of cave conservancies. The class will include three field trips to examine relevant topics in context. Topics covered include managing volunteers, cave gates, cave inventories and monitoring, cave management plans, relevant laws, cave restoration, cave survey and new cave discoveries, cave scientists and the manager, recreational cavers and much more.

Registration: Graduate, Undergraduate, or Workshop

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