

Exploration of Mammoth Cave

Western Kentucky University

Karst Field Studies

June 16 - 24, 2024

Syllabus

This course is an intensive study of the exploration of Mammoth Cave. A background of Mammoth Cave's geologic history will be provided before focusing on the human history of the cave: with a special emphasis given to different periods of exploration, the explorers, their discoveries, their motivations, the cultural impacts of their exploration, and current/future exploration endeavors. Illustrated lectures, maps, photographs, and first-hand accounts of discovery will be used to promote understanding of content prior to daily field trips. The daily field trips will require extensive travel both on the surface and underground within Mammoth Cave National Park. Surface travel can vary from paved paths, back country trails, and through areas with no developed trails. The underground trips will sometimes follow old tourist trails that have not been maintained in decades, while other trips will require more strenuous travel in completely undeveloped passages requiring extended periods of crawling. Some trips may require short climbs, but no rappelling or vertical caving will take place during this course. Possible field trips have the potential to last up to 8 hours on any given day of the course. Participants must be in good physical condition.

Instructor

Bruce Hatcher

Bruce Hatcher's interest in caves began at an early age while attending an elementary school program sponsored by Western Kentucky University (WKU). He grew up only a few miles outside of Mammoth Cave National Park and began caving regularly at the age of 12. He began guiding tours in Mammoth Onyx Cave at Kentucky Down Under when he was 14 years old. His guiding career also includes former work at Hidden River Cave and continued part-time duty at Mammoth Cave National Park. Bruce graduated from the University of Kentucky with a B.A. in Geology, and received his M.S. in Geosciences from WKU. He is an employee of the Commonwealth of Kentucky, where he currently works as an Environmental Scientist Advisor for the Department for Environmental Protection - Division of Water - Bowling Green Regional Office. He is also a current member of the Cave Research Foundation.

Course Objectives

This course is intended to introduce and deepen students understanding of the history of cave exploration at Mammoth Cave. The course topics will focus on the exploration of the world's longest cave system through different periods, and will mainly be covered in chronological order. Stories of individuals and groups will be discussed to provide insight into the effort and collaboration that has taken place to establish the known extents of the cave system. The importance of mapping and science as tools to aid future exploration will also be discussed. Content will be covered in both a classroom setting and in the field. Classes will begin and conclude daily at the Cave Research Foundation's Hamilton Valley Research Station.

Requirement for Undergraduate Credit

Participants who are taking the course for undergraduate credit must complete an independent research report, to be submitted to instructor within 2 weeks of course completion. Research reports may be conducted on a variety of topics related to cave exploration and do not need to be specific to Mammoth Cave. During the week of the course the instructor will create time to discuss possible topics and source materials for the research report.

Important Note:

What To Expect and How to Safely Prepare For The Strenuous Nature of the Course

Much of this course will take place in the field, through extended cave trips to remote sections of Mammoth Cave. Participants should be prepared for physically strenuous trips. Participants are expected to provide their own caving equipment: helmet, 3 sources of light (to include a headlamp), sturdy boots with aggressive tread, kneepads, gloves, and cave pack. It is important that participants be in good physical condition. Each day will consist of multiple miles covered via a combination of walking and crawling. Water, food, and first aid supplies are strongly suggested for extended cave trips. Several trips will require that we eat lunch in the cave. Participants should be prepared for lunch in the field, and be prepared to remove any and all trash / waste. We will practice the principles of Leave No Trace. We will place the utmost focus on the safety of each individual in the course through teamwork, and we will collectively focus on the protection and preservation of the natural environment of the cave. In addition to the cave environment participants should also be prepared for hiking through the woods which could expose them to hot/humid weather, ticks, and venomous snakes.

Tentative Schedule

Sunday – Meet & Greet

6:00 PM Meet at the Conference Room at Hamilton Valley to meet your instructor and fellow participants, as well as representatives of Western Kentucky University, Mammoth Cave National Park, and the Cave Research Foundation. We will spend 1-2 hours introducing ourselves, preparing participants for the coming week, orienting everyone to Hamilton Valley, Mammoth Cave National Park, and the surrounding area, and addressing any questions and/or concerns. This will also provide participants that have arranged to stay at Hamilton Valley the opportunity to check into their rooms.

The Meet & Greet is mandatory for all participants – not just for those staying at Hamilton Valley! By addressing questions/concerns, gear-related issues, etc. on Sunday night, we can avoid dealing with these issues on Monday and delaying cave trips.

Following the Meet & Greet students often collaborate on meal planning for the week, and travel to a nearby grocery store to obtain supplies for the week. Each participant is responsible for their meals during the course.

Monday – Introduction to Exploration and Early Explorers of Mammoth Cave

8:00 AM Introduction to the Geology and Nature of Mammoth Cave

9:00 AM Aboriginal Exploration of Mammoth Cave

9:30 AM Cave Trip w/lunch in the cave

Time Varies (Usually Between 5 and 7pm) – Recap of Day's Trip at Hamilton Valley

Tuesday – The Roots of Modern Exploration

8:00 AM Early 19th Century History & Slave Guides of Mammoth Cave

9:30 AM Cave Trip w/ lunch in the cave

Time Varies (Usually Between 5 and 7pm) – Recap of Day's Trip at Hamilton Valley

Wednesday – Exploration During the Cave Wars Era

8:00 AM Early 20th Century History and The Kentucky Cave Wars

9:30 AM Cave Trip w/lunch in the cave

Time Varies (Usually Between 5 and 7pm) – Recap of Day’s Trip at Hamilton Valley

Thursday – The Park Years and the Push for the Longest Cave

8:00 AM C-3, NSS, Austin & Pohl, CRF, & the 1972 Connection

9:30 AM Cave Trip w/lunch in the cave

Time Varies (Usually Between 5 and 7pm) – Recap of Day’s Trip at Hamilton Valley

Friday – Modern Exploration of Mammoth Cave

8:00 AM Cave Research Foundation, NPS, Roppel, and Current Exploration of Mammoth Cave

9:30 AM Cave Trip w/lunch in the cave

5:00 PM Recap of Day’s Trip & Closing of the class.

6:00 PM Optional Trip for Dinner in Cave City

Expectations

Due to the amount of course content that will take place in the field, participation in all class activities is a must. Participants that are enrolled in the course for college credit must participate in ALL course activities to receive credit. It is strongly recommended, that all participants eat breakfast each morning so we can avoid cavers “burning out” in the cave.

Participants are also required to follow all safe caving practices!

The first priority for all participants in the course is caving safety. It is imperative that all safe caving rules are followed. There will be no tolerance for cavers who are not following instructions and putting their safety or the safety of others at risk.

The second priority of the course is resource protection. We have been given a unique opportunity to visit places in Mammoth Cave that very few will ever get the opportunity to see. We will take every precaution to protect all cave resources and to have as little impact on the cave as possible. Once again, there will be zero tolerance for participants who are not respecting the resource protection policy.

Ultimately, the reason for the course is a focus on education. We will focus on teamwork, and building friendships throughout the week. We fully expect to have a great time together. An interest in caving is a common bond that we will all be able to share throughout the week. We must remember why we are here – to learn about the extensive and nuanced history of exploration at Mammoth Cave, and have a great time in the process.

Suggested Reading

The Longest Cave – Roger W. Brucker and Richard A. Watson

The Caves Beyond: The Story of The Floyd Collins’ Crystal Cave Exploration – Joe Lawrence, Jr. and Roger W. Brucker

Beyond Mammoth Cave: A Tale of Obsession in the World’s Longest Cave – James D. Borden and Roger W. Brucker

The Kentucky Cave Wars: The Century That Shaped Mammoth Cave National Park – David R. Kem

The Mammoth Cave of Kentucky – Horace Carter Hovey and Richard Ellsworth Call

Rambles in the Mammoth Cave – Alexander Clark Bullitt