

University of Arkansas - Fort Smith

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General Syllabus

GEOS 40904 – Geology of National Parks

Credit Hours: 4

Lecture Hours: 3

Lab Hours: 2

Effective Catalog: 2026-2027

I. Course Information

A. Catalog Description

This course examines the geologic formation and history of the different National parks and the overall National Park system. This class will periodically change location and focus on a specific region of the United States and the National Parks in that region.

B. Additional Information

Students may repeat this course up to two times as long as the regions of focus are different. This course is a core requirement for the B.S. degree in Geoscience Professional and Environmental concentrations.

II. Student Learning Outcomes

A. Subject Matter

Upon successful completion of this course, the student will be able to:

1. Analyze and interpret properties of landforms at specific National Parks.
2. Evaluate the formation of ancient depositions and structural changes through Earth's history.
3. Apply techniques for geologic mapping and survey work.
4. Review the mineral and rock formations of the area.
5. Explain the local tectonics and how it relates to global changes through Earth's history.
6. Discuss how the Park came into existence and how it correlates with the local community.

B. University Learning Outcomes

Geology of National Parks enhances student abilities in the following areas:

Analytical Skills

Critical Thinking Skills

Students will identify a problem or issue and will research, evaluate, and compare

information from varying sources in order to evaluate authority, accuracy, recency, and bias relevant to the problems/issues.

Communication Skills (written and oral)

Students will communicate proficiently. The student will compose coherent documents appropriate to the intended audience and effectively communicate orally in a public setting.

Ethical Decision Making

Students will model ethical decision-making processes. The students will identify ethical dilemmas and affected parties and will apply ethical frameworks to resolve a variety of ethical dilemmas.

Global & Cultural Perspectives

Students will reflect upon cultural differences and their implications for interacting with people from cultures other than their own. The students will demonstrate understanding or application of their discipline in a global environment and will demonstrate how their discipline impacts or is impacted by different cultures.

III. Major Course Topics

- A. Stratigraphy of the National Parks.
- B. Local landforms and topography.
- C. Analysis of regional and global tectonics.
- D. Fundamental elements of mapping.
- E. Utilization of GIS and web applications
- F. Identifications of paleoenvironmental deposition and mineralogy.
- G. Founding and history of the National Park.