University of Arkansas – Fort Smith
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General Syllabus

GEOS 31034 Geomorphology

Credit Hours: 4 Lecture Hours: 3 Laboratory Hours: 2

Prerequisite: GEOS 30134 Geological Field Methods.

Effective: 2018~2019

I. Course Information

A. Catalog Description

Studies landforms and the processes that modify them in fluvial, glacial, periglacial, aeolian, coastal, and semiarid environments. Topics include soils, fluvial processes, quaternary dating methods, and neotectonics. Laboratory emphasizes field techniques and data analysis.

B. Additional Information

This course is an elective for the B.S. degree in Geoscience.

II. Student Learning Outcomes

A. Subject Matter

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

1. Identify the morphology of fluvial, glacial, periglacial, aeolian, coastal, and semi-arid landforms and explain current theories about their development.
2. Utilize field techniques to identify, describe, and characterize common landforms.
3. Utilize topographic maps, aerial photographs, digital elevations models, and other quantitative techniques to analyze landforms and model important geomorphological processes.
4. Analyze slope stability, flood frequency, and other environmental problems related to geomorphology, and make recommendations for remediation.
5. Apply, plan, conduct, and report the findings of geomorphological fieldwork orally and in writing.

B. University Learning Outcomes

This course will enhance 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. Students will generate solutions/analysis of problems/issues evaluated and will assess and justify the solutions and/or analysis.

Communication Skills (written and oral)
Students will communicate proficiently. Students 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. 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. 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. Force, resistance, and equilibrium in geomorphology
B. Weathering and soils
C. Mass movement and slopes
D. Fluvial processes and landforms
E. Aeolian processes and landforms
F. Glacial and periglacial processes and landforms
G. Karst processes and landforms
H. Coastal processes and landforms