

Geotectonic of the Arabian Peninsula

GPH 612

Course Overview:

This course focuses on the geological and geophysical observations related to the Arabian Plate, including the formation of the Arabian Shield, the boundaries of the Arabian Plate, the Red Sea and Gulf of Aden rift systems, the Zagros collision zone, the Dead Sea transform fault system, as well as the seismic and volcanic activities associated with the Arabian Plate, with particular emphasis on the study of the volcanic fields (Harrat).

Course Objectives:

- ☐ Understand the Geological and Geophysical Framework of the Arabian Plate.
- ☐ Examine Major Tectonic Features such as the Red Sea Rift, Gulf of Aden, Zagros Collision, and Dead Sea Transform.
- ☐ Explore the Evolution and Structure of the Arabian Shield.

Course Objectives:

- ☐ Apply Geotectonic Concepts to Case Studies and Regional Data.
- ☐ Strengthen Scientific Reading, Writing, and Critical Thinking Skills.
- ☐ Improve Communication, and Presentation Skills.

Course Structure:

- ☐ Lectures.
- ☐ Sessions.
- ☐ Workshops.
- ☐ Discussions.
- ☐ Research Projects.

Assessment:

- ☐ Assignments.
- ☐ Reports.
- ☐ Research Papers.
- ☐ Presentations.
- ☐ Examinations.

Prerequisites:

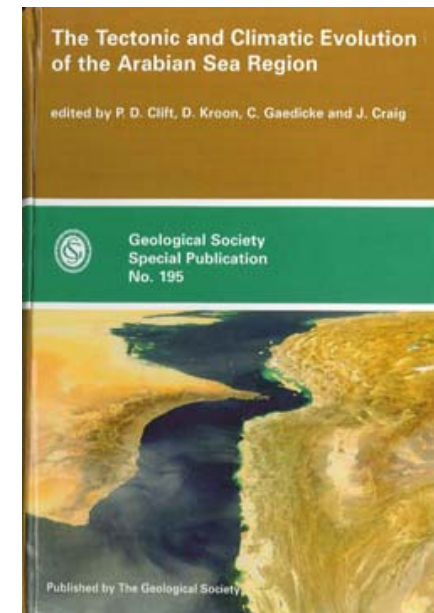
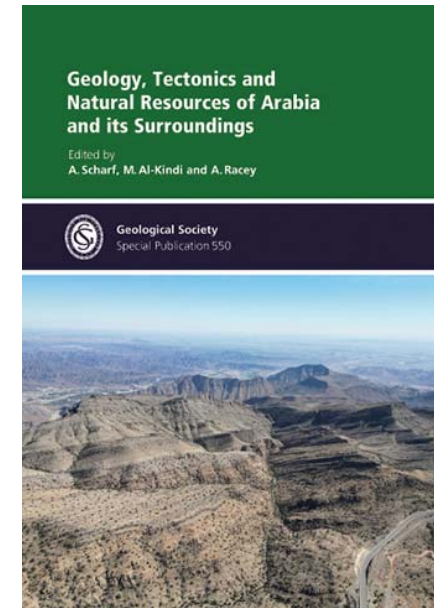
- ☐ Fundamentals of Geology and Plate Tectonics.
- ☐ Knowledge of Structural Geology Concepts.
- ☐ Understanding of Basic Geophysical Principles.
- ☐ Experience with Geological Mapping and Field Methods.

Credits:

3 hours (3+0+0)

Text Books:

- ❑ **Geology, Tectonics and Natural Resources of Arabia and its Surroundings** by A. Scharf, M.Al-Kindi and A. Racey (2025).
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Grading:

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|--|----|
| <input type="checkbox"/> Assignments | 20 |
| <input type="checkbox"/> Reports | 20 |
| <input type="checkbox"/> Research Proposal | 20 |
| <input type="checkbox"/> Presentations | 20 |
| <input type="checkbox"/> Examinations | 20 |

I Expect From You:

- ☐ Attendance.
- ☐ Participation.
- ☐ Deliver What is Needed On Time.
- ☐ Practice Active Learning.
- ☐ Read More and More.
- ☐ Seek Help When Needed.

Tips and Advices:

- ☐ Always Do Your Best.
- ☐ Develop Reading, Writing and Presentation Skills.
- ☐ Choose a Right Research Idea/Topic.
- ☐ Publish, Publish and Publish.
- ☐ Have a Good Study/Life Balance.

