



Salahaddin University-Erbil

College of Science

Department of Earth Science and Petroleum

Subject: Practical Geotectonics

Course: 2nd Semester / 4th Stage

Lecturer's name: Shevan Jameel Jirjees

Ph.D. Degree in Hydrology

Academic Year: 2023-2024

Course Book

1. Course name	Hydrology
2. Lecturer in charge	Lecturer: Dr. Shevan Jameel Jirjees
3. Department/ College	Department of Earth sciences and petroleum/ College of Science
4. Contact	e-mail: Shevan.jirjees@su.edu.krd Tel: (0750-452-0939)
5. Time (in hours) per week	Practical:8
6. Office hours	5 hr
7. Teacher's academic profile	I graduated from University of Salahaddin on 2010-2011, I employed in the geology department on 2011, then I got the M.Sc. in water resource management (Hydrology) from the same university on 2015. After that, I got the Ph.D. degree in (Hydrology) from the same university on 2023. Since that time I gave many courses in the Department of Geology such as Practical Hydrology and Hydrogeology ,Practical Geomorphology ,practical structural Geology and practical petroleum geology with Petrel software .
8. Course overview:	This course focuses on the important of Geotectonics which is a branch of geology dealing with the study of large- scale structural or deformational features of the Earth's crust and their relations, origin and historical evolution.
9. Course objective:	In this course, the students will be able to understand the important of The main objectives of Geotectonics lectures include gaining a basic, practical understanding of GIS concepts, techniques, and real-world applications, as well as identifying, protecting, and managing valuable parts of geodiversity. Geotectonics lectures aim to teach about the physical processes responsible for earthquakes, plate tectonics, and mountain building, using modern geodetic data to understand these phenomena. Additionally, these lectures focus on establishing timing in the landscape through dating methods and analysing the diverse physical characteristics of the Earth accurately.
10. Student's obligation	The student's obligation during the course is attendance in the class or lab for about two hours for studying the practical part of the course. Every lab there are many exercise to solve after a brief explaining for the theoretical part and then students must write a report with a discussion of what they did in the lab. There are marks on the attendance of the students and on the work of the students and on there reports.
11. Forms of teaching	In this course different forms of teaching are used such as power point presentations, whiteboard also is used. Figures that related to the lectures also are used to help student to understand the objects. Furthermore, students will be asked to prepare a report in each lab and there will be classroom discussions at the end of the presentations. I suggest to get best results of this course, students must read the theoretical lectures and teacher's notes before they attend the lab, and always try participate in classroom discussions as much as possible.

12. Assessment scheme

The students are required to do one exam in this course (15 marks from 35) after six or seven labs of practical Geotectonics. The attendance, classroom activities, and reports count 20 marks from the 35 marks.

13. Course Reading List and References:

➤ List of reference:

- Harper, Douglas. "tectonic". Online Etymology Dictionary.
- Geologists (as distinct from architects) may define tectonics as "the architecture of the Earth's crust" - O'Hara, Kieran D. (19 April 2018). A Brief History of Geology. Cambridge: Cambridge University Press. ISBN 9781107176188. Retrieved 23 March 2023. The words tectonics and architecture are derived from the same Greek root, and tectonics is defined as the architecture of the Earth's crust.
- Koeberl, C., Henkel, H., eds. (2005). Impact Tectonics. Impact Studies. Springer Berlin Heidelberg. doi:10.1007/3-540-27548-7. ISBN 978-3-540-24181-2.

➤ Magazines and review (internet):

- Iraqi Journal of Earth Science.
- Journal of Tectonics.

13. The Topics:	Lecturer's name
<p><u>Week 1</u>: An overview on the course, and explaining why understanding plate tectonic is matter.</p> <p><u>Week 2</u>: Explaining continental drift idea and palaeomagnetism, and what can Palaeomagnetism tell us as geologists.</p> <p><u>Week 3</u>: Explaining the driving force behind plate tectonics, and how plate boundaries are defined.</p> <p><u>Week 4</u>: Explaining mechanisms of forming distinctive basin environments in different plate tectonic settings. Then, will learn how over the geologic time our region, Kurdistan, has experienced some of these tectonic basin environments which were supplied by several types of sediments.</p> <p><u>Week 5 and 6</u>: Tectonic events have sculpted today's shape of our landscape (Iraq- Kurdistan). Then explaining how Kurdistan's position has changed along the history as part of the Arabian plate, and accumulated its currents sediments now seen on the surface.</p> <p><u>Week 7</u>: Explaining and discussing the main tectonics subdivision of Iraq in the present days.</p> <p><u>Week 8 and 9</u>: Explaining the currently common tectonic tools to determine and evaluate rates of erosion and exhumation over geologic time scale. And explaining role of tectonics, and climate in controlling rates of long-term landscape change.</p> <p><u>Week 10 and 11</u>: Seminars</p> <p><u>Week 12</u>: Mid-term examination.</p>	<p>Lecturer's name Shevan Jameel ex: (2hrs* 4groups)</p> <p>• Course Degree (35)</p> <ol style="list-style-type: none"> 1. 15/35 mark (Midterm Exam). 2. 5/35 mark (Report about topics). 3. 5/35 mark (Seminar about report (point 2)). 4. 10/35 mark (Lab report, Activity and Quiz).

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