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**Department of …Earth Sciences and Petroleum…………………….**

**College of …Science…………………………….**

**University of Salahaddin………………………….**

**Subject: ……Geology of Iraq…………………………….**

**Course Book – (Year 3)**

**Lecturer's name Irfan Shaaban Asaad MSc.**

**Academic Year: 2023/2024**

**Course Book**

**2023-2024**

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| **1. Course name** | **Micropaleontology** |
| **2. Lecturer**  | **Irfan Shaaban Asaad**  |
| **3. Department/ College** | **Earth Sciences and Petroleum / Science** |
| **4. Contact** | **Irfan.asaad@su.edu.krd****07504621348** |
| **5. Time (in hours) per week**  | **Practical: 8**  |
| **6. Office hours** | **Sunday, Tuesday & Wednesday 8 hours**  |
| **7. Course code** |  |
| **8. Teacher's academic profile**  | **BSc 2007, MSc 2019, both at the College of Science, Salahaddin University; Assistant Lecturer 2020**  |
| **9. Keywords** |  **Stratigraphy. Lithology, Formation, Kurdistan, Iraq** |
| **10. Course overview:** This subject designates in details the content of Geology of Kurdistan course and correlated with another Iraqi stratigraphic unit. The work enclosed in this unit, will provide a good source for all students’ upcoming studies in Geology accordingly that the energy students put in will surely be worth it. the module includes the following types:Weekly two hours practical learning per group (Maximum 20 students) which include exercises and works related to the theoretical part to explain the geology of Kurdistan to the students in more details. |
| **11. Course objective:**The geology of Kurdistan (Iraq) is a topic which attempts to define and divide the sedimentary rock units in Kurdistan region of Iraq. Dividing the layers into small stratigraphic units enable one to better understand and deal with rock beds. These small units (formations) can be grouped according to tectonic development and depositional history of the area.  |
| * **12. Student's obligation** Always, be present in the hall before the instructor
* You must close mobile before entering the hall
* You must be ready to hear the lecture
* You must sit down and don’t talk especially during explanation
* You must discuss and ask about all information that you can’t understand
* Always, you must read the required or text books to compare with lecture that you receive

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| * **13. Forms of teaching**
* Power Point presentations
* Explanations on blackboard
* Classroom discussions
* Helping in solution exercises on the bench
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| **14. Assessment scheme** Practical part equals **35%;** this degree will be approached byat least one examination in addition to quizzes plus the degree of the scientific trip. Sometimes the activity of the students within the classroom is evaluated and counted with the above-mentioned degree.  Final Examination: **50% only theoretical** **In addition to the above-mentioned gradings, we have many different quizzes during some the lecture time. The most important thing to evaluate the levels of students, is the scientific trip which deserves report of 100%.**‌ |
| **15. Student learning outcome:**The students who succeeded in this course;-Will be able to understand the historical scenarios of the deposition in Kurdistan region through the geologic time. Regarding the tectonic and eustatic sea level changes in the area in the Arabian plate tectonics and surrounded area. - Will be able to divided Kurdistan stratigraphic secessions to the stratigraphic units (formations) from older to younger and correlate it with the units in the middle and southern Iraq. - Will be able to understanding the lithology, age, depositional environment of each formation.  |
| **16. Course Reading List and References‌:**Buday, T., 1980, The regional geology of Iraq, v. 1, stratigraphy and paleogeography: Mosul, Iraq, Dar Al-Kutub Publishing House, University of Mosul, 445p. -Bellen, R.C. van, H.V. Dunnington, R. Wetzel, and D.M. Morton, eds., 1959, Lexique stratigraphic international: Paris, v. III, Asie, Fascicule 10a Iraq, 333p. -Alsharhan, A.S., and A.E.M. Nairn, 2003, Sedimentary basins and petroleum geology of the Middle East: Amsterdam, Netherlands, Elsevier Science B. V., 843p. -Jassim, S.Z., and J.C. Goff, eds., 2006: Geology of Iraq, first edition: Brno, Czech Republic, Prague and Moravian Museum, 345p. - Different Ph.D. dissertations and MSc thesis inside and outside of department. The dissertations, thesis, and papers are available on internet, library of faculty, Iraqi geological Journal, Zanco Journal of Pure Science, Journal of Zankoy Sulaimani, Journal of Kurdistan Academician, Iraqi Bulletin of Geology and Mining, etc.  |
| **17. The Topics:** | **Lecturer's name** |
|  **Course Program****Week 1 –** Tectonic Analysis of Iraq**Week 2 –** Paleozoic Stratigraphy**Week 3 –** Mesozoic Stratigraphy (Triassic Period)**Week 4 –** Mesozoic Stratigraphy (Jurassic Period)**Week 5 –** Geologic field trip to Soran- Choman area (16 hours including report assignment about the trip)**Week 6 –** Early Cretaceous Stratigraphy Assessment **Week 7 –** Middle Cretaceous Stratigraphy**Week 8 –** Late Cretaceous Stratigraphy**Week 9 –** Paleocene-Eocene Stratigraphy**Week 10 –** Group poster preparation and presenting**Week 11 –** Oligocene- Pliocene Stratigraphy**Week 12 –** Student presentations about selected topic about geology of Kurdistan | **Mr. Irfan Shaaban (8 hrs)**  |
| **12. Examinations:** **Fill the following blankets:**1-The first dominant carbonate rocks unit crops out in Iraq was…………………. Formation. 2-The depositional environment of Sarmord Formation is ……………………………..**Answer of the following:**1-What is the possible reason of decreasing and disappearance of structural and topographical complex toward SE of Iraq?2-What is the equivalent of the Mulussa and Zor Hauran formations in the Kurdistan area?23 |
| **20. Extra notes: No** |
| **21. Peer review پێداچوونه‌وه‌ی هاوه‌ڵ** **Dr. Sirwan Sakry**  |