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**Salahaddin University-Erbil**

**College of Science**

**Department of Earth Science and Petroleum**

**Subject: Field Geology-Theory**

**Course Book: 2nd Year**

**Lecturer's name: Awara Amin**

**PhD. in Tectonic and geomorphology**

**Academic Year: 2022-2023**

**Course Book**

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| **1. Course name** | **Field Geology-Theory** |
| **2. Lecturer in charge** | **Awara Amin** |
| **3. Department/ College** | **Department of earth science and petroleum** |
| **4. Contact** | **e-mail: awara.m.amin@su.edu.krd****Tel: (0751-198-8461)** |
| **5. Time (in hours) per week**  | **Theory:2 pulse practical 8**  |
| **6. Office hours** | **5 hr** |
| **7. Teacher's academic profile**  | **I have got M.Sc. in 2011 in geochemistry and petrogenesis of volcanic rocks located on Iraq-Iran border from Salahaddin University. Then I got PhD in 2020 in observing tectonic and geomorphologic impact on landscape development at the University of Glasgow. In the past ten years I have been teaching several subjects at both universities (Salahaddin and Glasgow) such as, optical mineralogy, practical igneous and metamorphic rocks, digital geology and mapping using corelDraw and Illustrator, and GIS, filed geology.**  |
| **8. Course overview:** **﻿**In field geology subject students are taught how to observe and collect data from rocks and/orunconsolidated deposits, which will later help them to understand further the physical, chemicalprocesses that have created and modified these rocks over geological time. Students are encouraged to initiate, or to build on, constructing and testing different hypotheses and interpretations based on the observations. |
| **9. Course objective:****The main objectives are :**1. ﻿Applying what they have been studying in class to hands-on in real-life situations. Clearly field studies and field trips will give magnificent opportunity to students to practice all the tools and techniques of measurement in the field.
2. ﻿Getting to travel and see landscape and geology of our region, Kurdistan. ﻿Many of us have been to many parts of our region but we do field trips to many areas where would be new to you and you will look around with different eyes from now and on!
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| **10. Student's obligation** Attendance is a key to pass this subject. Students must attend most of the lectures as part of the policy the department has. They will miss weekly activities if they miss any lecture which will leave impact on their grade at the end of semester. Students are given lectures in advance and they are expected to get the required lecture printed before attending any lecture. They are given weekly task and they have to solve it and send it by their own email. This is only to push them to make them more familiar with computer and email writing. |
| **11. Forms of teaching**Lectures are in powerPoint form, and they are presented for students on high resolution projectors. Often the lectures are dominated by sketches and graphs to make the message (take out) clear and easy for students.  |
| **12. Assessment scheme**The students are required to do one exam in this course. The grade division is like that in this subject: Monthly exam is over 50 and final exam is over 50. Together becomes 100. So the monthly exam is also divided like that: 15 for theory and 35 for practical part. Usually after five or six lecture, they do an exam. Their 15 scores come from the exam and their attendance, classroom activities, and reports.  |
| **13. Course Reading List and References‌:*** **List of reference:**
* Coe, A.L. ed., 2010. Geological field techniques. John Wiley & Sons.
* **YouTube and online lectures (internet):**
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| **13. The Topics:** | **Lecturer's name** |
| Week 1: **A general introduction on the field geology topic and** **commonly used equipment in the field.**Week 2**: Presenting and explaining the common equipments (e.g. compass, hand lenss and binoculars) used in the field. You may also be given some tips on magnetic declination.**Week 3: **You will be given some usages of compass in geology. For instance, using compass to determine the ﻿orientation of a dipping plane, and ﻿orientation of a linear feature.**Week 4: **How to find your location/ or any other geologic features on a base map using compass (﻿Triangulation) and GPS.**Week 5: **After the fourth week, we may do our first field trip, so we would have a lecture on how to stay safe in the field.**Week 6: **There is a common saying “A picture is worth a thousand words”! So this week we will be focusing on field sketches.**Week 7: **I present some simple geologic features which you may be able to recognize them in the field. Lets see based on our time.**Week 8 & 9: **You will learn the basic steps of drawing/building geologic cross section and stratigraphic column.**Week 10: **Based on some base maps you will learn how to read contour and geologic maps properly, and how we convert base map to geologic map.** | **Awara Amin** |