



Faculty of Earth Sciences



Department of Mineral Resources & Rocks 3rd & 4th Years Program



The Geological Society
Accredited degree courses

GEOLOGY OF THE KINGDOM

Course Name	Course ID	Prerequisite
Geology of the Kingdom	EMR 431	ESR 301, EMR 304

Time Table for Course Lectures

Geology of the Kingdom (EMR 431)

Week	Topic
1	Introduction about the Geology of the Kingdom ^[1] Arabian Shield - Sedimentary Cover - Arabian Shield Forms of Two Parts - Hijaz Tectonic Cycle. - Najd Fault System. -
2	Hijaz Tectonic Cycle ^[2] including: First Episode *- Baish Group - Baha Group - Jeddah Group - Aqiq Orogeny ^[3] *-
3	Hijaz Tectonic Cycle including: Second Episode *- Ablah Group - Ranyah Orogeny *- Halaban Group - Yafikh Orogeny. *-
4	Hijaz Tectonic Cycle including: Third Episode *- Murdama Group -

	Shummar Group - Bishah Orogeny. *-
5	Najd Fault System. Jubaylah Group - Ash-Shabah Orogeny *-
6	Discussion about the First, Second, and Third Classification
7	Revision and Final Exam.
8	Introduction about the Geology of the Kingdom Sedimentary Cover *- Sedimentary Cover Forms of 34 Formations - Who to Make a Stratigraphic Column for the Formations. -
9	Study of Formations from the Oldest, 1. Saq Formation 2. Qasim Formation 3. Zarqa Formation 4. Sara Formation 5. Qalibah Formation
10	Study of Formations (continued) 6. Tawil Formation 7. Jauf Formation 8. Jubah Formation 9. Berwath Formation 10. Unayzah Formation 11. Khuff Formation
11	Study of Formations (continued) 12. Sudair Formation 13. Jilh Formation 14. Minjur Formation 15. Marrat Formation 16. Dhurma Formation
12	Study of Formations (Continued) 17. Tuwaiq Formation 18. Hanifa Formation 19. Jubaila Formation 20. Arab Formation 21. Hith Formation
13	Study of Formations (continued) 22. Sulaiy Formation 23. Yamama Formation 24. Buwaib Formation 25. Biyadh Formation 26. Wasia Formation

14	Study of Formations (continued)
	27. Aruma Formation
	28. Umm Er-Radhuma Formation
	29. Rus Formation
	30. Dammam Formation
	31. Hadruk Formation
	32. Dam Formation
	33. Hoffuf Formation
34. Kharj Formation	
15	Revision and Final Exam.

References:

Geology of the Arabian Peninsula: Shield Area of Western Saudi Arabia, by [1] Brown G.F., Schmidt and Huffman A.C. JR., 1989. U.S.G.S., Prof. paper 560-A. P.163-188.

Geology of the Arabian Shield, by Al Shanti, A.M., 2002. King Abdulaziz [2] Research Council 1996.

Diagenetic Aspects of the Carbonate Rocks of the Upper Jurassic Jubaila [3] Formation, Central Saudi Arabia, by Basyoni M.B., 2003. J. Fac. Sci. KSU, v. 15, p.11-36.

GEOLOGY OF THE KINGDOM (EMR 431)

Time Table for Practical Course

Lab #	Topic
1	Introduction about the Geology of the Kingdom -Arabian Shield -Sedimentary Cover Arabian Shield forms of two parts - Hijaz Tectonic Cycle. - Najd Fault System.
2	Hijaz Tectonic Cycle including, *- First Episode - Baish Group - Baha Group - Jeddah Group *- Aqiq Orogeny
3	Hijaz Tectonic Cycle including, *- Second Episode - Ablah Group *- Ranyah Orogeny - Halaban Group *- Yafikh Orogeny

4	Hijaz Tectonic Cycle including *- Third Episode - Murdama Group - Shummar Group *- Bishah Orogeny
5	Najd Fault System - Jubaylah Group *- Ash-Shabah Orogeny
6	Discussion about the first , second and third classification
7	Revision and Final Exam.
8	Introduction about the Geology of the kingdom *- Sedimentary Cover Sedimentary Cover forms of 34 formations Who to make a stratigraphic column for the formations.
9	Study of formations from the oldest 1. Saq Formation, (5- Samples) 2. Qasim Formation, (5- Samples) 3. Zarqa Formation, (No Sample) 4. Sara Formation, (No Sample) 5. Qalibah Formation, (2-Samples)
10	Continued of Formations Study 6. Tawil Formation, (1-Sample) 7. Jauf Formation, (2-Samples) 8. Jubah Formation, (No -Samples) 9. Berwath Formation, (No-Samples) 10. Unayzah Formation, (4-Samples) 11. Khuff Formation, (6-Samples)
11	Continued of Formations Study 12. Sudair Formation, (2-Samples) 13. Jilh Formation, (3-Samples) 14. Minjur Formation, (2-Samples) 15. Marrat Formation, (3-Samples) 16. Dhurma Formation, (3-Samples)
12	Continued of Formations Study 17. Tuwaiq Formation, (3-Samples) 18. Hanifa Formation, (2-Samples) 19. Jubaila Formation, (2-Samples) 20. Arab Formation, (3-Samples) 21. Hith Formation, (2-Samples)
13	Continued of Formations Study 22. Sulaiy Formation, (2-Samples) 23. Yamama Formation, (2-Samples) 24. Buwaib Formation, (2-Samples) 25. Biyadh Formation, (2-Samples)

	26. Wasia Formation, (3-Samples)
14	Continued of Formations Study 27. Aruma Formation, (1-Sample) 28. Umm Er-Radhuma Formation, (1-Sample) 29. Rus Formation, (2-Samples) 30. Dammam Formation, (1-Sample) 31. Hadrukh Formation, (No- Sample) 32. Dam Formation, (1-Sample) 33. Hoffuf Formation, (1-Sample) 34. Kharj Formation, (No-Sample)
15	Revision and Final Exam.

References:

Geology of the Arabian Peninsula: Shield Area of Western Saudi Arabia, by [1] Brown G.F., Schmidt and Huffman, A.C., JR., 1989. U.S.G.S., Prof. paper 560-A. P.163-188.

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Diagenetic aspects of the carbonate rocks of the Upper Jurassic Jubaila [3] Formation, Central Saudi Arabia, by Basyoni M.B., 2003. J. Fac. Sci. KSU, v. 15, p.11-36.