

**MASTER OF SCIENCE DEGREE
OFFERED BY
THE DEPARTMENT.**

M. Sc. Degree in Geology

Geological science deals with the studies of academic and applied fields, e.g. mineral, oil and groundwater exploration. Also, the interpretation of tectonic movements and sub-surface geological structures have a great importance on these studies.

Graduate courses for master degree studies have various domains; e.g. studies on minerals and fossils, in addition to the structural, geophysical and hydrogeological studies. These studies enrich the way of thinking of students towards working in a variety of jobs e.g. teaching and researching both in applied and academic domains at scientific institution. Besides, graduates can be offered better positions in companies dealing with the exploration of groundwater, petroleum, mineral, geophysical and geological survey.

Aims:

- Prepare graduate student to study Ph.D. in various domains of geology and enhance the graduate's academic personality through the scientific research, the discussion and the presentation of his research.
- Training of graduate students on presenting and discussing research works in both applied and academic fields.
- To ensure the availability of educated people in order to serve the country in this scientific field.
- To concentrate on solving the local problems.
- To train the student on various sophisticated technology used in the field of geology especially with the most sophisticated computer geologic programs and Geographic Information System , GIS.
- To train the student to depend on himself after graduation.

Conditions of Admission

- In addition to the conditions and Regulations of the College of Graduate Studies at the University, the applicant should have a B.Sc. degree in geology or geophysics or any other related subject.
- The applicant should go through an interview made by the Department Admission Committee, and pass any written or oral tests required by the department to evaluate the student's English language level.

Academic System

The study in this program goes through by both courses and thesis.

A specialized guidance committee that consists of two or three members from the teaching staff members of the department will be dedicated for each student. The purpose of this committee is to define the student educational goal, according to his desire, supervised by a committee member.

Branches

Five branches are available for the student to accommodate his desire. These branches are: Hydrogeology, Petroleum Geology, Paleontology , Sedimentary rocks and Stratigraphy and Economic Geology.

No. of Credit units

- The applicant studies 24 units distributed through 3 semesters, by which the student can select some of them with the help of a specialized guidance committee.
- The course 600 GEO (M.Sc. thesis), includes the preparation and writing the thesis not less than one year.
- The research must be supervised by a member or more from the teaching staff of the department.
- A thesis should be written and submitted, then the student should pass an examination accordingly.

Academic Plan

The plan was originated according to Semester System as follows.

a- 9 Required units (Chosen from the following with respect to the branch)

No.	COURSES No. & SYMBOL	COURSE TITLE	UNITS
1	501 GEO	Advanced Geology of Saudi Arabia	3 (2+1)
2	522 GEO	Advanced Igneous Petrology	3 (2+1)
3	523 GEO	Advanced Metamorphic Petrology	3 (2+1)
4	532 GEO	Advanced Stratigraphy	3 (2+1)
5	533 GEO	Advanced Sedimentary Rocks	3 (2+1)
6	542 GEO	Invertebrate Paleontology (I)	3 (2+1)

b- 15 Selective units (Chosen from the following with respect to the branch)

No.	COURSES No. & SYMBOL	COURSE TITLE	UNITS
1	512 GEO	Geostatistics	3 (2+1)
2	534 GEO	Advanced Carbonate Rocks and Evaporites	3 (2+1)
3	536 GEO	Recent Sediments	2 (2+0)
4	543 GEO	Invertebrate Paleontology (II)	3 (2+1)
5	544 GEO	Invertebrate Paleontology (III)	3 (2+1)
6	547 GEO	Advanced Microfossils	3 (2+1)
7	548 GEO	Advanced Biostratigraphy	2 (1+1)
8	549 GEO	Advanced Paleochology	3 (2+1)
9	554 GEO	Mining Geology	3 (2+1)
10	555 GEO	Advanced Hydrogeology	3 (2+1)
11	556 GEO	Advanced Petroleum Geology	3 (2+1)
12	561 GEO	Advanced Geochemistry	3 (2+1)
13	564 GEO	Geochronology	2 (2+0)
14	566 GEO	Mineral Geochemistry	2 (1+1)
15	572 GEO	Applied Geophysics	3 (2+1)
16	573 GEO	Interpretation of Well Logging	3 (2+1)
17	586 GEO	Dynamic Geology	3 (2+1)
18	598 GEO	Geologic Seminar	1 (1+0)
19	599 GEO	Special Topics	1 (1+0)

THE FOLLOWING LEVELS

No.	COURSES No. & SYMBOL	COURSE TITLE	UNITS
1	600 GEO	Thesis	6 (0+6)

GRADUATE COURSES PLAN
M. Sc. DEGREE IN GEOLOGY
DEPARTMENT OF GEOLOGY , COLLAGE OF SCIENCE

Branch: Hydrogeology

FIRST LEVEL

No.	COURSES No. & SYMBOL	COURSE TITLE	UNITS
1	501 GEO	Advanced Geology of Saudi Arabia	3 (2+1)
2	532 GEO	Advanced Stratigraphy	3 (2+1)
3	533 GEO	Sedimentary Rocks	3 (2+1)
			9 units

SECOND LEVEL

No.	COURSES No. & SYMBOL	COURSE TITLE	UNITS
1	512 GEO	Geostatistics	3 (2+1)
2	555 GEO	Advanced Hydrogeology	3 (2+1)
3	572 GEO	Applied Geophysics	3 (2+1)
			9 units

THIRD LEVEL

No.	COURSES No. & SYMBOL	COURSE TITLE	UNITS
1	573 GEO	Interpretation of Well Logging	3 (2+1)
2	586 GEO	Dynamic Geology	3 (2+1)
			6 units

THE FOLLOWING LEVELS

No.	COURSES No. & SYMBOL	COURSE TITLE	UNITS
1	600 GEO	Thesis	6 (0+6)

GRADUATE COURSES PLAN
M. Sc. DEGREE IN GEOLOGY
DEPARTMENT OF GEOLOGY , COLLAGE OF SCIENCE

Branch: Petroleum Geology

FIRST LEVEL

No.	COURSES No. & SYMBOL	COURSE TITLE	UNITS
1	501 GEO	Advanced Geology of Saudi Arabia	3 (2+1)
2	532 GEO	Advanced Stratigraphy	3 (2+1)
3	533 GEO	Sedimentary Rocks	3 (2+1)
			9 units

SECOND LEVEL

No.	COURSES No. & SYMBOL	COURSE TITLE	UNITS
1	534 GEO	Advanced Carbonates and Evaporites	3 (2+1)
2	556 GEO	Advanced Petroleum Geology	3 (2+1)
3	572 GEO	Applied Geophysics	3 (2+1)
			9 units

THIRD LEVEL

No.	COURSES No. & SYMBOL	COURSE TITLE	UNITS
1	573 GEO	Interpretation of Well Logging	3 (2+1)
2	586 GEO	Dynamic Geology	3 (2+1)
			6 units

THE FOLLOWING LEVELS

No.	COURSES No. & SYMBOL	COURSE TITLE	UNITS
1	600 GEO	Thesis	6 (0+6)

GRADUATE COURSES PLAN
M. Sc. DEGREE IN GEOLOGY
DEPARTMENT OF GEOLOGY , COLLAGE OF SCIENCE

Branch: Paleontology

FIRST LEVEL

No.	COURSES No. & SYMBOL	COURSE TITLE	UNITS
1	501 GEO	Advanced Geology of Saudi Arabia	3 (2+1)
2	532 GEO	Advanced Stratigraphy	3 (2+1)
3	542 GEO	Invertebrate Paleontology (I)	3 (2+1)
			9 units

SECOND LEVEL

No.	COURSES No. & SYMBOL	COURSE TITLE	UNITS
1	534 GEO	Advanced Carbonates and Evaporites	3 (2+1)
2	543 GEO	Invertebrate Paleontology (II)	3 (2+1)
3	547 GEO	Advanced Microfossils	3 (2+1)
			9 units

THIRD LEVEL

No.	COURSES No. & SYMBOL	COURSE TITLE	UNITS
1	544 GEO	Invertebrate Paleontology (III)	3 (2+1)
2	549 GEO	Advanced Paleochology	3 (2+1)
			6 units

THE FOLLOWING LEVELS

No.	COURSES No. & SYMBOL	COURSE TITLE	UNITS
1	600 GEO	Thesis	6 (0+6)

GRADUATE COURSES PLAN
M. Sc. DEGREE IN GEOLOGY
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Branch: Sedimentary Rocks & Stratigraphy

FIRST LEVEL

No.	COURSES No. & SYMBOL	COURSE TITLE	UNITS
1	501 GEO	Advanced Geology of Saudi Arabia	3 (2+1)
2	532 GEO	Advanced Stratigraphy	3 (2+1)
3	533 GEO	Sedimentary Rocks	3 (2+1)
			9 units

SECOND LEVEL

No.	COURSES No. & SYMBOL	COURSE TITLE	UNITS
1	534 GEO	Advanced Carbonate and Evaporites	3 (2+1)
2	536 GEO	Recent Sediments	2 (2+0)
3	548 GEO	Advanced Biostratigraphy	2 (1+1)
4	598 GEO	Geologic Seminar	1 (1+0)
			8 units

THIRD LEVEL

No.	COURSES No. & SYMBOL	COURSE TITLE	UNITS
1	573 GEO	Interpretation of Well Logging	3 (2+1)
2	586 GEO	Dynamic Geology	3 (2+1)
3	599 GEO	Special Topics	1 (1+0)
			7 units

THE FOLLOWING LEVELS

No.	COURSES No. & SYMBOL	COURSE TITLE	UNITS
1	600 GEO	Thesis	6 (0+6)

GRADUATE COURSES PLAN
M. Sc. DEGREE IN GEOLOGY
DEPARTMENT OF GEOLOGY , COLLAGE OF SCIENCE

Branch: Economic Geology

FIRST LEVEL

No.	COURSES No. & SYMBOL	COURSE TITLE	UNITS
1	501 GEO	Advanced Geology of Saudi Arabia	3 (2+1)
2	522 GEO	Advanced Igneous Petrology	3 (2+1)
3	523 GEO	Advanced Metamorphic Petrology	3 (2+1)
			9 units

SECOND LEVEL

No.	COURSES No. & SYMBOL	COURSE TITLE	UNITS
1	554 GEO	Mining Geology	3 (2+1)
2	561 GEO	Advanced Geochemistry	3 (2+1)
3	564 GEO	Geochronology	2 (2+0)
			8 units

THIRD LEVEL

No.	COURSES No. & SYMBOL	COURSE TITLE	UNITS
1	566 GEO	Mineral Geochemistry	2 (1+1)
2	586 GEO	Dynamic Geology	3 (2+1)
3	598 GEO	Geologic Seminar	1 (1+0)
4	599 GEO	Special Topics	1 (1+0)
			7 units

THE FOLLOWING LEVELS

No.	COURSES No. & SYMBOL	COURSE TITLE	UNITS
1	600 GEO	Thesis	6 (0+6)

Courses - description: