

GEOLO TRACKS

PETROLEUM GEOLOGY TRACK

All students in must satisfy 120 credit hours

1. COMMON REQUIREMENTS

36 Credit hours

1.1. University General Requirements

27 Credit hours

1.2. College Compulsory Requirements

9 Credit hours

Course No.	Course Title	Semester	Prerequisite	Cr Hr
ITBP 103	Principles of IT	1&2	-	3
MATH 105	Calculus 1	1&2	-	3
PHYS 1052	General Physics 1	1&2	-	3

2. MAJOR SPECIALIZATION AND SUPPORTING COURSES REQUIREMENT

2.1 Major Specialization Requirements

45 Credit hours

All Geology major students in the Department must take 25 credit hours of departmental compulsory courses as given in the following table.

2.1.1. Departmental Compulsory Courses

25 Credit hours

Course No.	Course Title	Semester	Prerequisite	Cr Hr
GEOA 105	Physical Geology	1 & 2	-	3
GEOA 290	Structural Geology & Tectonics	1 & 2	GEOA 105	4
GEOA 320	Mineralogy	1 & 2	GEOA 105+PHYS 105+CHEM 111	4
GEOA 325	Sedimentology & Stratigraphy	1 & 2	GEOA 320	4
GEOA 372	Geophysics	1 & 2	GEOA 285+PHYS 105+MATH 105	3
GEOA 458	Geology of the UAE	1 & 2	GEOA 325+GEOA 290	3
GEOA 499	Field Geology	1 & 2	GEOA 458	4

2.1.2. Track Compulsory Courses

17 Credit hours

Course No.	Course Title	Semester	Prerequisite	Cr Hr
GEOP 453	Petroleum and Subsurface Geology	1 & 2	GEOA 325+PHYS 110+MATH 105	3
GEOP 413	Petrophysics	1	GEOA 325+GEOA 372+MATH 110+PHYS 110	3
GEOP 420	Basin Analysis	1 & 2	GEOA 453+CHEM 111	3
GEOP 463	Geophysical Exploration	2	GEOA 372+MATH 110+PHYS 110	3
GEOP 469	Petroleum Geochemistry	2	GEOA 325+CHEM 111	3
GEOP 499	Research Project	1 & 2	GEOP 453+GEOP 413+GEOP 420+GEOP 463+GEOP469	2

2.1.3. Track Elective Courses

3 Credit hours

Course No.	Course Title	Semester	Prerequisite	Cr Hr
GEOP 322	Igneous & metamorphic petrology for petroleum Geologists	2	GEOA 320	3
PETE 403	Well Logging	1	PETE 300 or GEOA 372	3
GEOP 431	Seismic Stratigraphy	1	GEOA 330+GEOA 372	3
GEOP 495	Selected Topics	1& 2	GEOP 453+GEOP 413	3

* Students who concentrated in Petroleum Geology must take other course than PETE 403.

2.2 Supporting Requirements

33 Credit hours

2.2.1. Compulsory Courses

15 Credit hours

Course No.	Course Title	Semester	Prerequisite	Cr Hr
CHEM 111	General Chemistry I	1 & 2	-	3
CHEM 112	General Chemistry II	1 & 2	CHEM 111	2
CHEM 115	General Chemistry Lab.	1 & 2	CHEM 112	1
CHEM 241	Organic chemistry I	1 & 2	CHEM 111	3
PHYS 110	General Physics II	1 & 2	PHYS 105	3
MATH 110	Calculus II	1 & 2	MATH 105	3

2.2.2. Elective Courses

18 Credit hours

The student may take 18 Credit hours from the following courses with STAT 210 and PETE 300 as mandatory courses. Otherwise, and upon the approval of the Department, the students select a total of 18 Credit hours from one of the approved concentrations.

Course No.	Course Title	Semester	Prerequisite	Cr Hr
BIOC105	Basic Biology I	1 & 2	-	3
STAT 210	Probability and Statistics	1 & 2	MATH 110	3
PETE 300	Reservoir Rock Properties	2	GEOA 115	3
PETE 403	Well Logging	1	PETE 300 or GEOA 372	3
PHYS 215	Thermal Physics	1 & 2	PHYS 105	2
ENG 310	Writing I	1 & 2	-	3
PSY 342	Educational Psychology*	2	-	3
GEO 312	Geomorphology	2	-	3

** Students of the College of Science who are planning to join the program of the professional diploma in teaching must study the course of Educational Psychology course number PSY 342, as it is a prerequisite for the curriculum of that diploma.*

3. PROFESSIONAL INTERNSHIP PROGRAM

6 Credit hours

Course No.	Course Title	Semester	Prerequisite	Cr Hr
GEOA 500	Internship	1&2	90 CH + GPA $\geq$ 2.00	6

CONCENTRATION IN GEOLO

The Department offers a concentration in Geology for students from other Departments and Colleges (18 Credit hours to be selected from the following list of courses for Non-Geology students).

Course No.	Course Title	Semester	Prerequisite	Cr Hr
GEOA 105	Physical Geology	1 & 2	-	3
GEOA 285	Structural Geology & Tectonics	1 & 2	GEOA 105	4
GEOA 320	Mineralogy	1 & 2	GEOA 105+PHYS 105+CHEM 111	4
GEOA 324	Sedimentology & Stratigraphy	1 & 2	GEOA 320	4
GEOA 372	Geophysics	1 & 2	GEOA 290+PHYS 105+MATH 105	3
GEOA 322	Igneous & Metamorphic Petrology	2	GEOA 320	4
GEOA 461	Geochemistry	1	GEOA 325+GEOA 322+CHEM 112	3
GEOA 245	Paleontology	1 & 2	GEOA 105+BIOC 105	4
GEOA 412	Remote Sensing and GIS	2	GEOA 290+MATH 105+PHYS 105	3
GEOA 414	Environmental Geology	2	GEOA 330	3
GEOP 453	Petroleum & Subsurface Geology	1	GEOA 330+PHYS 110+MATH 105	3
GEOA 358	Hydrogeology	1	GEOA 330+PHYS 105+MATH 105+ CHEM 111	3
GEOP 468	Petroleum Geochemistry	2	GEOA 330+CHEM 111	3
GEOP 463	Geophysical Exploration	2	GEOA 372+MATH 110+PHYS 110	3
GEOA 462	Hydrogeochemistry	2	GEOA 358	3