



Degree and Study Plan

College: Science
 Department: Earth Sciences
 Cohorts: 2018 - 2020
 Degree: Bachelor of Science
 Major: Earth Sciences
 Specialization:

Summary of Credits:	
University Requirements (UR)	6
Foundation Program	NC ⁺
Arabic	2
State and People	2
Oman & Islamic Civilization or Islamic Culture	2
University Electives (UE)	6
See List A	
College Requirements (CR)	3
See list B	
College Electives (CE)	16
See List C	
Departmental Requirements (DR)	19
See list D	
Departmental Electives	6
See list E	
Major Requirements (AR)	45
See list F	
Major Electives (AE)	21
See list G	
Specialization Requirements (SR)	
See list H	
Specialization Electives (SE)	
See list I	
Minor Requirements (IR)	++
See list J	
Minor Electives (IE)	++
See list K	
TOTAL	122

+ Not credited

++ Minor is optional: minimum total credits to earn a Minor are 18. Courses counting towards an approved Minor may substitute courses listed as Major Electives (List G) but no more than 8 credits counting towards the Major degree (lists C, D, E, F) may count towards a Minor.

For reference contact: Dr. Iftikhar Ahmed Ext. 6839

HoD: Prof. Osman Abdalla Date 14 / 10 / 2023

Dean's Office: Dr. Talal Al-Hosni Date 12 / 11 / 2023

Admission and Registration: Date



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University Requirements (UR)	6
University Electives (UE)	6
College Requirements (CR)	3
College Electives (CE)	16
Departmental Requirements (DR)	19
Departmental Electives (DE)	6
Major Requirement (AR)	48
Major Electives (AE)	21
TOTAL (Credit Hours)	122

	Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
Semester 1 Fall	ERSC2101	Introduction to Geology I	4	FPEL0560 or FPEL0600 or FPEL0603 or FPEL0604	CE
	LANC2058	Communication in Science	3	FPEL0560 or FPEL0600 or FPEL0603 or FPEL0604	CR
	CHEM2101	General Chemistry I	4	FPEL0560 or FPEL0600 or FPEL0603 or FPEL0604 and (FPMT0108 or FPMT0109)	CE
	HIST1010 or ISLM1010	Oman & Islamic Civilization or Islamic Culture	2		UR
		University Elective	2		UE
	Total		15		
Semester 2 Spring	ERSC2102	Introduction to Geology II	4	ERSC2101	DR
	PHYS2101	General Physics I	4	FPEL0560 or FPEL0600 or FPEL0603 or FPEL0604 and FPMT0108 or FPMT0109	CE
	MATH2107	Calculus I	4	FPEL0560 or FPEL0600 or FPEL0603 or FPEL0604 and FPMT0108 or FPMT0109	CE
	ARAB1060 or ARAB1019*	Arabic or Arabic For Non-Arabic Speaker (3cr.hr)	2		UR
	SOCY1005 or SOCY1007*	State and People or Omani Contemporary Society	2		UR
	Total		16	* For non-Omani citizens only	

Semester 3 Fall	ERSC2211	Paleontology I	3	ERSC2101 and LANC2058	AR
	ERSC3000	Environmental Geology	3	ERSC2101 and LANC2058	AR
	ERSC3010	Mineralogy	3	ERSC2102 and LANC2058	AR
		Department Elective	3		DE
		Major Elective	3		AE
	Total		15		

Semester 4 Spring	ERSC3021	Structural Geology	3	ERSC2102 and LANC2058	DR
	ERSC3041	Stratigraphy	3	ERSC2102 and LANC2058	DR
	ERSC3051	Igneous Petrology	3	ERSC3010 and LANC2058	AR
	ERSC3901	Sedimentary Petrology	3	ERSC2211 and ERSC3010	AR
		Major Elective	3		AE
	Total		15		

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	Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
Semester 5 Fall	GEOP3041	General Geophysics	3	ERSC2101 and PHYS2101 and MATH2107 and LANC2058	DR
	ERSC3061	Remote Sensing	3	ERSC2102 and LANC2058	AR
	ERSC4012	Metamorphic Petrology	3	ERSC3051	AR
	ERSC4311	Sedimentary Environments & Facies	3	ERSC3901	AR
		Major Elective	3		AE
	Total		15		

Semester 6 Spring	ERSC3031	Geology of Oman	3	ERSC3041 and LANC2058	DR
	ERSC4031	Geochemistry	3	ERSC2102 and CHEM2101	AR
	ERSC4071	Economic Geology	3	ERSC3051	AR
		Major Elective	3		AE
		Major Elective	3		AE
	Total		15		

Semester 7 Fall	ERSC4001	Field Mapping Techniques	3	ERSC3021 and ERSC3901	AR
	ERSC4051	Hydrogeology	3	ERSC3000	AR
	ERSC5051	Petroleum Geology	3	ERSC3041	AR
		Major Elective	3		AE
		Department Elective	3		DE
	Total		15		

Semester 8 Spring	ERSC4000	Field Mapping Project	3	ERSC4001	AR
	ERSC4040	Geological Interpretation of Well-logs	3	ERSC3041	DR
	ERSC5012	Sequence Stratigraphy	3	ERSC4311	AR
		Major Elective	3		AE
		University Elective	2		UE
		University Elective	2		UE
	Total		16		

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Degree Plan : 122 credits			
Course code	Cr	Course Title	Prerequisites (Co-requisites)
University Requirements: 6 Credits			
ARAB1060 or ARAB1019*	2	Arabic Arabic For Non-Arabic Speaker (3Cr)	
HIST1010 or ISLM1010	2	Oman & Islamic Civilization or Islamic Culture	
SOCY1005 or SOCY1007*	2	State and People Omani Contemporary Society	

*For non-omani citizens only

LIST A: University Electives (6 credits)

See SQU Deanship of Admission and Registration website for the list of University Electives

LIST B: COLLEGE REQUIRMENTS (3 credits)

Code	Title	Cr	Pre-Requisite / Co-req. *
LANC 2058 [†]	Communication in Science	3	FPEL 0560 or FPEL0600 or FPEL0603 or FPEL0604
Total		3	

[†]LANC2058 is a pre-requisite for all 3000-level College of Science courses.

LIST C: COLLEGE ELECTIVES (16 credits)

Code	Title	Credits	Pre-Requisite / Co-req. *
BIOL2101	General Biology I	4	FPEL0560 or FPEL0600 or FPEL0603 or FPEL0604
CHEM2101 [†]	General Chemistry I	4	FPEL0560 or FPEL0600 or FPEL0603 or FPEL0604 and FPMT0108 or FPMT0109
ERSC2101 [†]	Introduction to Geology I	4	FPEL0560 or FPEL0600 or FPEL0603 or FPEL0604
COMP2101	Introduction to Computer Science	4	FPEL0560 or FPEL0600 or FPEL0603 or FPEL0604) and (FPCS0101 or PCS0102)
MATH2107	Calculus I	4	FPEL0560 or FPEL0600 or FPEL0603 or FPEL0604 and FPMT0108 or FPMT0109
PHYS2101 [†]	General Physics I	4	FPEL0560 or FPEL0600 or FPEL0603 or FPEL0604 and FPMT0108 or FPMT0109
STAT2101	Introduction to Statistics	4	FPEL0560 or FPEL0600 or FPEL0603 or FPEL0604 and FPMT0108 or FPMT0109
Total		16	

[†]ERSC2101, CHEM2101, MATH2107, and PHYS2101 are key pre-requisite courses for Earth Sciences major.
Credits taken in excess of 16 can be counted as Major Electives (List G)

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LIST D: DEPARTMENTAL REQUIREMENTS (19 credits)

Code	Title	Credits	Pre-Requisite / Co-req. *
ERSC2102	Introduction to Geology II	4	ERSC2101
ERSC3021	Structural Geology	3	ERSC2102 and LANC2058
ERSC3031	Geology of Oman	3	ERSC3041 and LANC2058
ERSC3041	Stratigraphy	3	ERSC2102 and LANC2058
ERSC4040	Geological Interpretation of Well-logs	3	ERSC3041
GEOP3041	General Geophysics	3	ERSC2101 and PHYS2101 and MATH2107 and LANC2058
Total		19	

LIST E: DEPARTMENTAL ELECTIVES (6 credits)

Code	Title	Credits	Pre-Requisite / Co-req. *
ERSC2112	Historical Geology	3	ERSC2101
ERSC3002	Environmental Site Assessment and Remediation	3	ERSC2102 and ERSC3000 and LANC2058
ERSC3071	GIS and Geo-Spatial Applications	3	ERSC2102 and LANC2058
ERSC3210	Palaeontology II	3	ERSC2211 and LANC2058
ERSC4032	Environmental Geochemistry	3	ERSC2101 and CHEM2101
ERSC4321	Structural Geology II	3	ERSC3021
ERSC5011	Basin Analysis	3	ERSC3021 and ERSC4311
ERSC5031	Tectonics	3	ERSC3021
ERSC5061	Exploration Geophysics	3	GEOP3041
ERSC5071	Image Processing and GIS	3	ERSC3061
ERSC5111	Microfacies	3	ERSC3901
ERSC5900	Advanced Diagenesis and Sedimentary Geochemistry	3	ERSC3901
ERSC5101	Geology Project I	2	ERSC4001
ERSC5102	Geology Project II	4	ERSC5101*
GEOP3042	Principles of Geophysical Well Logging	3	GEOP3041
Total		6	

Credits taken in excess of 6 can be counted as Major Electives (List G)

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LIST F: MAJOR REQUIREMENTS (45 credits)

Code	Title	Credits	Pre-Requisite / Co-req. *
ERSC2211	Paleontology	3	ERSC2101 and LANC2058
ERSC3000	Environmental Geology	3	ERSC2101 and LANC2058
ERSC3010	Mineralogy	3	ERSC2102* and LANC2058
ERSC3051	Igneous Petrology	3	ERSC3010 and LANC2058
ERSC3061	Remote Sensing	3	ERSC2102 and LANC2058
ERSC3901	Sedimentary Petrology	3	ERSC2211 and ERSC3010
ERSC4000	Field Mapping Project	3	ERSC4001
ERSC4001	Field Mapping Techniques	3	ERSC3021 and ERSC3901
ERSC4012	Metamorphic Petrology	3	ERSC3051
ERSC4031	Geochemistry	3	ERSC2102 and CHEM2101
ERSC4051	Hydrogeology	3	ERSC3000
ERSC4071	Economic Geology	3	ERSC3051
ERSC4311	Sedimentary Environments and Facies	3	ERSC3901
ERSC5012	Techniques in Sequence Stratigraphy	3	ERSC4311
ERSC5051	Petroleum Geology	3	ERSC3041
Total		45	

LIST G. MAJOR ELECTIVES (AR) (21 Credits)

“All College of Science courses not used for required courses (Lists A, B, C, D, E, F, H and I) can be taken as major electives”.

Refer Major Electives page on the College Website:

<https://www.squ.edu.om/science/Academic-Programs/Undergraduate-Programs/Major-Electives>

MINORS AVAILABLE TO Earth Science MAJORS

LISTS J and K: MINOR REQUIREMENTS and ELECTIVES (18 Credits)

Refer to Minor page on the College Website to see the available minors and their requirements:

<https://www.squ.edu.om/science/Academic-Programs/Undergraduate-Programs>

* Students are required to complete 18 Credits in the minor courses to qualify for a minor.

* Courses counting towards an approved Minor may substitute courses listed as Major Electives (List G) but no more than 8 credits counting towards the Major degree (lists C, D, E, F) may count towards a Minor.

* Students should take a minor different than their major.

For reference contact:

Dr. Iftikhar Ahmed

Ext. 6839

Approved by Dean of Science:

Dr. Talal Al Hosni

Date: 12/ 11 / 2022

Office of Admissions & Registration:

Confirmed:

