

MINERAL GEOSCIENCE (PG- MINGS)

- All units are 6 points unless otherwise stated
- **Units in bold are compulsory units**
- *Units in Italics consist of two parts; you must enrol in both parts within one academic year*

First Academic Year

Semester 1	Semester 2
EART1105 Earth and Environment: Dynamic Planet	EART1104 Earth and Environment: Geological Perspectives
One of: MATH1010 ¹ Calculus and Linear Algebra (only for students who have passed TEE Applicable Maths and TEE Calculus with marks of 70+) MATH1025 Calculus and Matrix Methods (only for students who have passed TEE Applicable Mathematics and TEE Calculus) MATH1040 Calculus B (only for students who have passed TEE Applicable Mathematics, but not TEE Calculus) MATH1050 Calculus C (compulsory for students who have NOT passed TEE Applicable Maths)	One of: MATH1020 ¹ Calculus, Statistics and Probability (only for students who have passed TEE Applicable Maths and TEE Calculus with marks of 70+) STAT1510 Statistics A (for students who have passed TEE Applicable Mathematics) STAT1530 Statistics B (for students who have passed MATH1050 Calculus C) STAT2210 Biometrics 1 (Recommended for all students)
One of: CHEM1101 Inorganic and Physical Chemistry (only for students who have passed TEE Chem. with a mark of 70+) CHEM1103 Biological Organic Chemistry (only for students who have passed TEE Chemistry) CHEM1105 Introductory Chemistry (compulsory for students who have not passed TEE Chemistry)	One of: CHEM1102 Organic Chemistry (only for students who have passed TEE Chem. with a mark of 70+) CHEM1104 Biological Inorganic & Physical Chemistry
Optional unit selected from Table 1	Optional unit selected from Table 1

Second Academic Year

Semester 1	Semester 2
EART2201 Intro. to Geographic Information Systems	EART2233 Earth History Methods
EART2231 Earth Materials	EART2234 Structural and Metamorphic Geology
EART2232 Field Geology	EART2235 Introduction to Geochemistry
Optional unit. This unit is selected from TABLE 2.	Optional unit. This unit is selected from TABLE 2.

Third Academic Year

Semester 1	Semester 2
EART3348 Geological Mapping-Part 1	EART3349 Geological Mapping-Part 2
EART3342 Mineralogy and Petrology	EART3344 Basin Analysis
EART3343 Structural Geology and Tectonics	EART3345 Mineral Exploration Technology
EART3351 Mineral Resources	EART3346 Ore Deposit Genesis

Fourth Academic Year

Semester 1	Semester 2
SCIE4501 FNAS Research Project - Part 1	SCIE4503 FNAS Research Project - Part 3
SCIE4502 FNAS Research Project - Part 2	SCIE4504 FNAS Research Project - Part 4
EART3330 Geographic Information Systems and Remote Sensing	Optional unit. This unit is selected from TABLE 2 or 3.
Optional unit. This unit is selected from TABLE 2 or 3.	Optional unit. This unit is selected from TABLE 2 or 3.

TABLE 1: SELECTION OF THE REMAINING LEVEL 1 UNITS

Semester 1		Semester 2	
BIOL1130	Core Concepts in Biology	BIOL1131	Plant and Animal Biology
PHYS1101	Advanced Physics A (for students who have passed TEE Physics and TEE Calculus)	EART1108	Earth and Environment: Geographical Perspectives
PHYS1131	Introductory Physics (for students who have not passed TEE Physics)	PHYS1102	Advanced Physics B (for students who have passed TEE Physics and TEE Calculus and PHYS1101)
PHYS1141	General Physics A (for students who have passed TEE Physics or TEE Applicable Maths)	PHYS1142	General Physics B (for students who have passed TEE Physics or TEE Applicable Maths)
		EART1110	Earth and Environment: Terrestrial Ecosystems

¹ Students who have passed TEE Applicable Maths, but not TEE Calculus may instead complete MATH1030 Calculus A in the Summer Semester

TABLE 2: SELECTION OF LEVEL 2 OPTIONAL UNITS (a minimum of 12 points must be selected from TABLE 1)

Semester 1		Semester 2	
EART2222	Earth Surface Processes and Soils	EART2221	Coastal Geomorphology and Sediments
ECON1120	Environmental Economics	ENVT2251	Environmental Hydrology
CIVL2121	Engineering Geology and Geomechanics	ENVT2210	Environmental Policy and Law
	or other units approved by the Faculty		or other units approved by the Faculty

TABLE 3: SELECTION OF LEVEL 2 and 3 OPTIONAL UNITS (a maximum of 18 points may be selected from TABLE 3)

Semester 1		Semester 2	
EART3320	Environmental Change	EART3304	Env Planning, Mgmt & Sustainability
EART3323	Land, Soil and Water Systems	EART3322	How Soils Function
EART3325	Env Geomorphology: Streams & Catchments	EART3324	Env. Geomorphology of Sheltered Coasts
SCIE3366	Project and Risk Management	SCIE3367	Management Decision Tools
EART8711	Hydrogeology	EART8712	Hydrogeology in Context
EART8713	Advances in Hydrogeology	EART8752	Land Rehabilitation in Context
EART8751	Land Rehabilitation		
EART8753	Advances in Land Rehabilitation		
		ENVT3333	Land and Water: Case Studies in Land and Water Management
MINE3161	Surface Mining	MINE3160	Rock Mechanics and Rock Slopes
MINE3162	Underground Mining 1	MINE4160	Mine Geology
MINE4151	Reliability Engineering	MINE4161	Mine Design
		MINE4162	Underground Mining 2
		MINE4165	Mining Management