

# Faculty of Natural and Agricultural Sciences

Fakulteit Natuur- en Landbouwetenskappe Lefapha la Disaense tša Tlhago le Temo

# Bachelor of Science in Environmental and Engineering Geology



#### Make today matter

The degree offers further specialisation in engineering geology and hydrogeology. Engineering geology is the study of the behaviour of ground (soil and rock) and how likely it is to affect engineering works. It comprises geotechnical studies and relates to construction (eg founding or excavation) on and with geological materials (eg construction materials), and to the influences of geological, geomorphological and hydrological processes on construction and development. Hydrogeology refers to the occurrence, distribution and movement of water below the Earth's surface. The study of groundwater is generally both quantitative (eg water supply, safe abstraction and the influences of pumping) and qualitative (eg contamination, remediation and drinking water).



#### Who is the ideal candidate?

The programme requires a strong understanding of mathematics and mechanics. Genuine concern for our planet, a desire to work outdoors and an interest in geology or geomorphology will be an advantage. Depending on your personality, you can choose how you would like to divide your time between doing fieldwork and working on a computer.



## What makes this programme unique?

Very few universities offer professional qualifications in engineering geology and hydrogeology. UP offers both, which places it in a strong position on the interface between infrastructure development and subsurface water. The qualification complies with the requirements for professional registration.



### Career opportunities

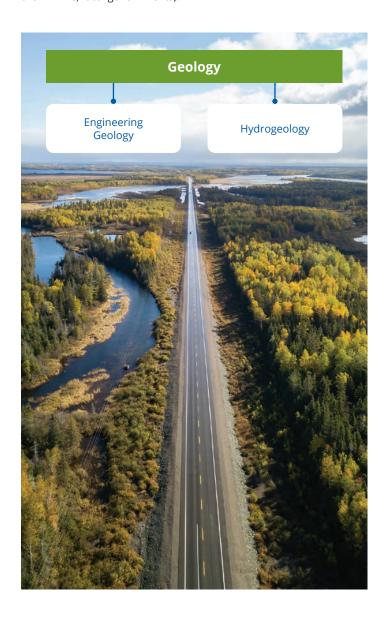
Engineering geologists work closely with civil engineers, mining engineers, town planners and environmental scientists. Your work will require you to identify geological hazards, source building materials and supply foundation solutions.

As a hydrogeologist you will be involved in the supply of water for urban, agricultural and industrial use. Nowadays many graduates work in contaminant transport and remediation, which involves identifying sources of pollution and finding suitable remediation solutions.



## Which companies employ our graduates?

Our graduates are employed by civil and infrastructure industries, the mining industry and parastatals (eg the Council for Geoscience; CSIR), as well as by government (eg the Department of Water Affairs; the NHBRC; local governments).



#### Minimum admission requirements

	Minimum requirements for NSC/IEB for 2026							
	Achievement level							
Programme	English Home Language or English First Additional Language	Mathematics	Physical Sciences	APS				
<b>Bachelor of Science in Environmental and Engineering Geology</b> [3 years]	5	5	5	34				



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Minimum requirements for applicants with a school leaving certificate not issued by Umalusi (South Africa)





Refer to the International undergraduate prospectus at www.up.ac.za/programmes > Undergraduate > Admission Information or <u>click here</u> for more information.

- The closing date for applications for programmes in this faculty is 30 June.
- Meeting the minimum admission requirements does not guarantee admission into a programme.

	Minimum requirements for 2026									
	Achievement level									
	GCSE #				AS Level	A Level	IB			
		The qualifications in t two columns below w be considered only for conditional admissio If final AS and/or A levels have been completed, these two columns will not appl It can also not be use for final admission an or registration.								
FACULTY OF NATURAL AND AGRICULTURAL SCIENCES	Compulsory subjects	CIE	UK	HIGCSE NSSC HL	GCE CIE	GCE CIE	IB SL	IB HL	KOMBI ABITUR	KCSE
Programmes		IGCSE LGCSE BGCSE EGCSE  O Level NSSC OL CGCE UCE NECO WAEC WASSCE ZGCE	England Wales Northern Ireland Pearson Edexcel GCSE		NSSC AS	CGCE UACE WAEC ZGCE				
Bachelor of Science in Biochemistry				3 3	C	E E E	4 4	3 3 3		
Bachelor of Science in Biotechnology										
Bachelor of Science in Ecology	-									
Bachelor of Science in Zoology	_									
Bachelor of Science in Entomology										
Bachelor of Science in Genetics										
Bachelor of Science in Human Genetics	_									
Bachelor of Science in Human Physiology										
Bachelor of Science in Human Physiology, Genetics and Psychology	English	С							60-69%	В
Bachelor of Science in Medical Sciences	Mathematics	C	4 4						60-69%	В
Bachelor of Science in Microbiology	Physics	С	4	3	C		4		60-69%	В
Bachelor of Science in Plant Science	Chemistry	С	4	3	С	E	4	3	60-69%	В
Bachelor of Science in Chemistry										
Bachelor of Science in Physics										
Bachelor of Science in Geography										
[Option: Geography and Environmental Science]										
Bachelor of Science in Geoinformatics										
Bachelor of Science in Geology										
Bachelor of Science in Meteorology										
Bachelor of Science in Environmental and Engineering Geology										

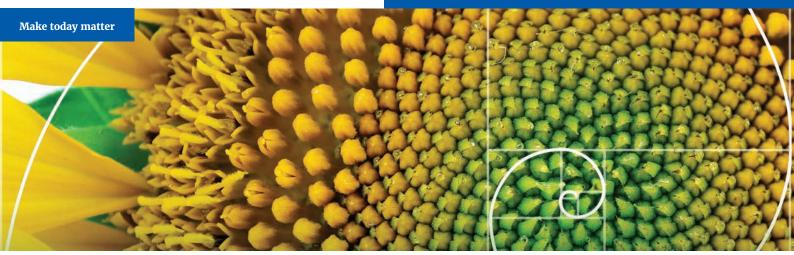


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	Minimum requirements for 2026										
		1	Achievement level								
FACULTY OF NATURAL AND AGRICULTURAL SCIENCES	Compulsory subjects	GCSE #  The qualifications in the two columns below will be considered only for conditional admission. If final AS and/or A levels have been completed, these two columns will not apply. It can also not be used for final admission and/or registration.			AS Level	A Level		В			
			England Wales Northern Ireland Pearson Edexcel GCSE	HIGCSE NSSC HL	GCE CIE NSSC AS	GCE CIE CGCE UACE WAEC ZGCE	IB SL	IB HL	KOMBI ABITUR	KCSE	
Programmes											
Bachelor of Science in Food Science											
Bachelor of Science in Food Management [Option: Culinary Science]		C C	4 4 4 4	3 3 3 3	C C C	E E E	4 4 4 4	3 3 3 3	60-69% 60-69% 60-69% 60-69%		
Bachelor of Science in Food Management [Option: Nutritional Science]										B B B	
Bachelor of Science in Agriculture in Agricultural Economics in Agribusiness Management	English Mathematics Physics										
Bachelor of Science in Agriculture in Animal Science	Chemistry										
Bachelor of Science in Agriculture in Plant Pathology											
Bachelor of Science in Agriculture in Applied Plant and Soil Sciences											
Bachelor of Science in Actuarial and Financial Mathematics	English Mathematics	C A	4 7	3 1	C A	E C	4 6	3 5	60-69% 80-100%	B A	
Bachelor of Science in Mathematics											
Bachelor of Science in Applied Mathematics	English Mathematics	C B	4 5	3 2	C B	E D	4 5	3	60-69% 70-79%	B B+	
Bachelor of Science in Mathematical Statistics	iviaciieiliatics		3				J	4	70-7970	Бт	
Bachelor of Consumer Science specialising in Clothing and Retail Management Bachelor of Consumer Science	English Mathematics	C D	4 3	3	C D	E E	4 2	3 2	60-69% 50-59%	B C+	
specialising in Food Management											

# Only English with at least a C symbol on this level can be used for final admission.

NOTE: The Faculty of Natural and Agricultural Sciences requires the following achievement levels for IELTS and TOEFL: TOEFL - Writing=22; Speaking=23; Reading=21; Listening=17 IELTS - Writing=6; Speaking=6; Reading=6; Listening=6



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	Minimum requirements for 2026										
			Achievement level								
		GCS	SE #		AS Level	A Level	IB				
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FACULTY OF NATURAL AND AGRICULTURAL SCIENCES	Compulsory subjects	y CIE IGCSE	<b>UK</b> England	HIGCSE NSSC HL	GCE CIE NSSC	GCE CIE CGCE	IB SL	IB HL	KOMBI ABITUR	KCSE	
Programmes		LGCSE BGCSE EGCSE O Level NSSC OL CGCE UCE NECO WAEC WASSCE ZGCE	Wales Northern Ireland Pearson Edexcel GCSE		AS	UACE WAEC ZGCE					
Bachelor of Science in Mathematics [4-year programme]	English Mathematics	D C	3 4	3 3	0 0	E E	2 4	2 3	58% 65%	B- B	
Bachelor of Science in Chemistry [4-year programme]											
Bachelor of Science in Geoinformatics [4-year programme]											
Bachelor of Science in Geology [4-year programme]											
Bachelor of Science in Meteorology [4-year programme]		D D D	3 3 3 3	3 3 3 3	D D D	E E E	2 2 2 2 2	2 2 2 2	58% 58% 58% 58%		
Bachelor of Science in Physics [4-year programme]	English Mathematics Physics Chemistry									B- B-	
Bachelor of Science in Ecology [4-year programme]										B- B-	
Bachelor of Science in Human Physiology [4-year programme]											
Bachelor of Science in Agriculture in Applied Plant and Soil Sciences [5-year programme]											
Bachelor of Science in Agriculture in Plant Pathology [5-year programme]											

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