



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Natural and Agricultural Sciences

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

Bachelor of Science Actuarial and Financial Mathematics



Make today matter

The modern financial world has a growing need for graduates who are well skilled in analytical problem solving, modelling and other quantitative techniques. The programme provides students with a broad education and skills development in these areas. Students can tailor their coursework to either an actuarial or a financial mathematics option.

The actuarial programme is structured to provide the aspiring actuary with the opportunity to fulfil the requirements needed for exemption from the Actuarial Society of South Africa examinations in the shortest possible time. For aspiring financial analysts or financial engineers, the programme provides depth and develops the student's ability to design and analyse financial products.

What is an actuary?

An actuary is a professional who applies analytical, statistical and mathematical skills to financial and business problems. This is especially valuable when facing real-world problems that involve uncertain future events or financial risk. This ability to quantify that which is unclear helps individuals and businesses to safeguard their future, confidently and at a fair price, in an ever-changing world. (Actuarial Society of South Africa).

Who is the ideal candidate?



The ideal candidates are students who achieve seven or more A's easily in high school. They are involved in a variety of sports and cultural activities and usually hold leadership positions throughout high school. They are well-balanced and very motivated.

While not prerequisites at school, prospective students are probably taking and enjoying an AP Mathematics course, where possible. They are also likely to enjoy coding or solving problems using a computer where these opportunities are available.

Which companies employ our graduates?



Bachelor of Science *Actuarial and Financial Mathematics* graduates are generally employed by accounting firms; banks; consulting firms; insurance companies; investment companies; medical schemes and universities.

What makes this programme unique?



The study programme prepares students for qualification as actuaries or financial engineers. Specialisation in either of these fields occurs in the third year of study and continues at postgraduate level.

The programme is accredited with the Actuarial Society of South Africa and gives students the opportunity to earn exemptions from the A100 and A200 subjects of the Actuarial Society during their undergraduate degree. To achieve further exemptions, a follow-up honours degree is recommended.

We prepare our students to compete in the actuarial workplace. Large employers of actuarial students speak highly of our graduates and some actively seek students from our programme.

Career opportunities



Many actuaries follow careers in the more traditional fields of insurance and retirement funds. However, actuaries are also increasingly working in other fields following recognition of their analytical skills. This includes healthcare, financial consulting, risk management and banking. Because of their unique skills, many actuaries are appointed to senior management positions after their initial analytical roles.

Financial engineers can be employed by banks and financial institutions, brokerage firms and investment institutions. They are essential in portfolio and risk management. Activities include asset management (trading in bonds, futures and derivative instruments such as options), designing new financial products and devising strategies to control credit risk.



Minimum admission requirements

Programme	Minimum requirements for NSC/IEB for 2025		
	Achievement level		APS
	English Home Language or English First Additional Language	Mathematics	
Bachelor of Science <i>Actuarial and Financial Mathematics</i> [3 years]	5	7	36



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



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Refer to the International undergraduate prospectus at www.up.ac.za/programmes > Undergraduate > Admission Information or [click here](#) 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.

FACULTY OF NATURAL AND AGRICULTURAL SCIENCES Programmes	Minimum requirements for 2025									
	Compulsory subjects	GCSE #		HIGCSE NSSC HL	Achievement level			KOMBI ABITUR	KCSE	
		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	IB			
		CIE	UK		GCE CIE NSSC AS	GCE CIE CGCE UACE WAEC ZIMSEC	IB SL			IB HL
	IGCSE LGCSE BGCSE SGCSE	England Wales Northern Ireland								
	O Level NSSC OL CGCE UCE NECO WAEC ZIMSEC									
Bachelor of Science <i>Biochemistry</i>										
Bachelor of Science <i>Biotechnology</i>										
Bachelor of Science <i>Ecology</i>										
Bachelor of Science <i>Zoology</i>										
Bachelor of Science <i>Entomology</i>										
Bachelor of Science <i>Genetics</i>										
Bachelor of Science <i>Human Genetics</i>										
Bachelor of Science <i>Human Physiology</i>										
Bachelor of Science <i>Human Physiology, Genetics and Psychology</i>										
Bachelor of Science <i>Medical Sciences</i>	English	C	4	3	C	E	4	3	60-69%	B
Bachelor of Science <i>Microbiology</i>	Mathematics	C	4	3	C	E	4	3	60-69%	B
Bachelor of Science <i>Plant Science</i>	Physics	C	4	3	C	E	4	3	60-69%	B
Bachelor of Science <i>Chemistry</i>	Chemistry	C	4	3	C	E	4	3	60-69%	B
Bachelor of Science <i>Physics</i>										
Bachelor of Science <i>Geography</i> [Option: Geography and Environmental Science]										
Bachelor of Science <i>Geoinformatics</i>										
Bachelor of Science <i>Geology</i>										
Bachelor of Science <i>Meteorology</i>										
Bachelor of Science <i>Environmental and Engineering Geology</i>										

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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	Compulsory subjects	Achievement level								KOMBI ABITUR	KCSE
		GCSE #		HIGCSE NSSC HL	AS Level	A Level	IB				
		CIE	UK				IB SL	IB HL			
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.											
	IGCSE LGCSE BGCSE SGCSE	England Wales Northern Ireland		GCE CIE NSSC AS	GCE CIE CGCE UACE WAEC ZIMSEC						
	O Level NSSC OL CGCE UCE NECO WAEC ZIMSEC										
Bachelor of Science <i>Food Science</i>											
Bachelor of Science in Food Management [Option: Culinary Science]											
Bachelor of Science in Food Management [Option: Nutrition]											
Bachelor of Science in Agriculture in Agricultural Economics and Agribusiness Management	English	C	4	3	C	E	4	3	60-69%	B	
	Mathematics	C	4	3	C	E	4	3	60-69%	B	
	Physics	C	4	3	C	E	4	3	60-69%	B	
	Chemistry	C	4	3	C	E	4	3	60-69%	B	
Bachelor of Science in Agriculture in Animal Science											
Bachelor of Science in Agriculture in Plant Pathology											
Bachelor of Science in Agriculture in Applied Plant and Soil Sciences											
Bachelor of Science <i>Actuarial and Financial Mathematics</i>	English	C	4	3	C	E	4	3	60-69%	B	
	Mathematics	A	7	1	A	C	6	5	80-100%	A	
Bachelor of Science <i>Mathematics</i>											
Bachelor of Science <i>Applied Mathematics</i>	English	C	4	3	C	E	4	3	60-69%	B	
Bachelor of Science <i>Mathematical Statistics</i>	Mathematics	B	5	2	B	D	5	4	70-79%	B+	
Bachelor of Consumer Science <i>Clothing Retail Management</i>											
Bachelor of Consumer Science <i>Food Retail Management</i>	English	C	4	3	C	E	4	3	60-69%	B	
	Mathematics	D	3	3	D	E	2	2	50-59%	C+	
Bachelor of Consumer Science <i>Hospitality Management</i>											

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

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IELTS – Writing=6; Speaking=6; Reading=6; Listening=6

