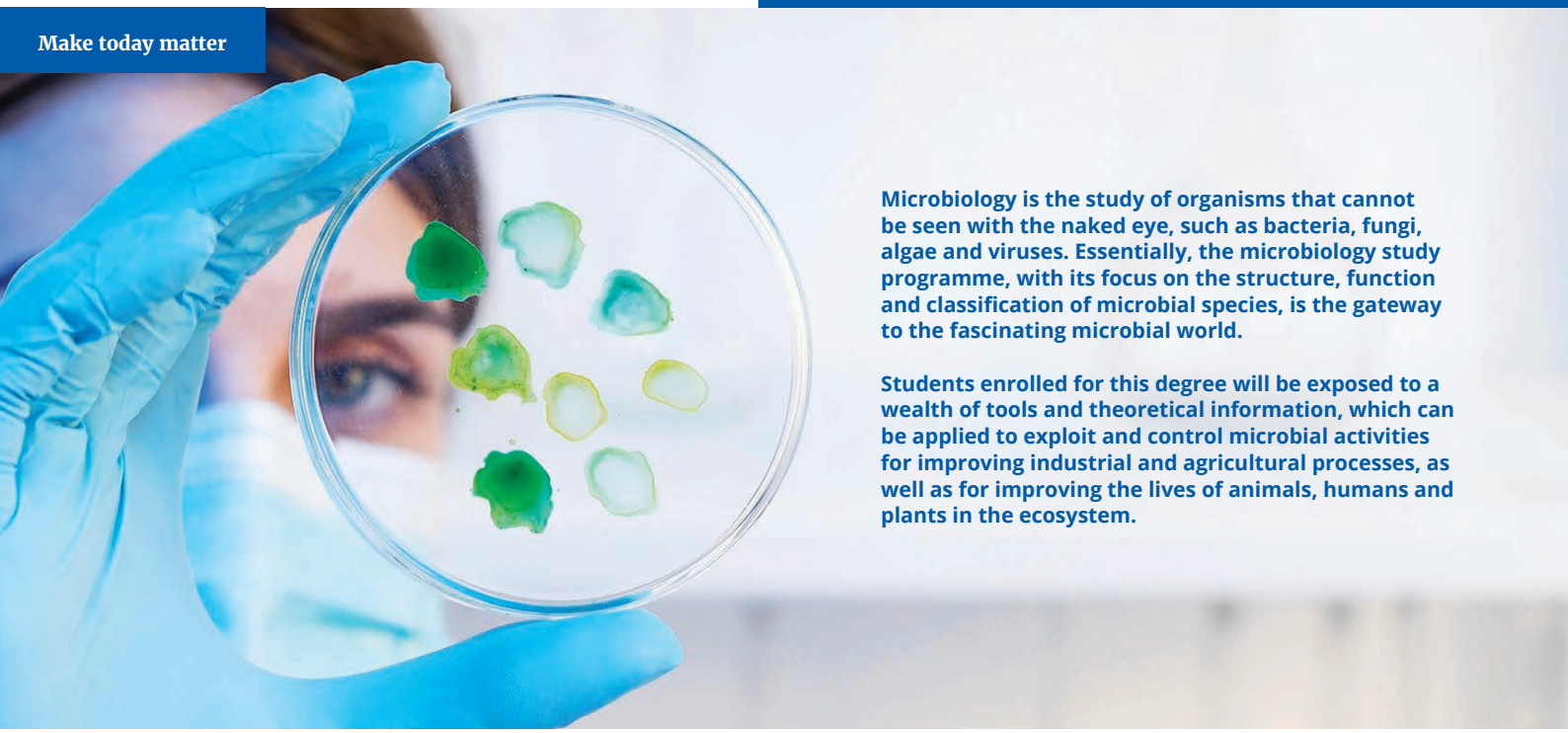
UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Natural and Agricultural Sciences

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

Bachelor of Science *Microbiology*

Make today matter



Microbiology is the study of organisms that cannot be seen with the naked eye, such as bacteria, fungi, algae and viruses. Essentially, the microbiology study programme, with its focus on the structure, function and classification of microbial species, is the gateway to the fascinating microbial world.

Students enrolled for this degree will be exposed to a wealth of tools and theoretical information, which can be applied to exploit and control microbial activities for improving industrial and agricultural processes, as well as for improving the lives of animals, humans and plants in the ecosystem.

Who is the ideal candidate?

Aspiring microbiologists should have a solid background in science and are expected to demonstrate curiosity about how biological systems function in their environments. Microbiology overlaps with areas such as botany, chemistry, zoology, physiology, genetics, medicine, nutrition and environmental sciences.

Candidates recognise that the field of microbiology has evolved, and continues to evolve, to cut across scientific disciplines, and understand that microbes impact every aspect of life on earth.

What makes this programme unique?

In microbiology, students learn about the different types of microbes which, even though invisible to the naked eye, represent the most abundant life forms on earth. It is believed that many microbes have not yet been discovered, and others are well adapted to survive in extreme conditions (eg in hydrothermal vents) that resemble conditions believed to have been prevalent when life began on earth billions of years ago. Microbiology is also one of only a few degree programmes that unites a diverse group of individuals (eg immunologists, geneticists, bioinformaticians, computational biologists, environmental scientists, etc) under one umbrella.

Career opportunities

Since the field of microbiology has many branches, graduates can follow various careers in industry or in academia, where they can contribute to increasing scientific knowledge, or they can establish their own businesses.

Which companies employ our graduates?

Graduates with microbiology degrees are employed by leading research institutes in South Africa, including the CSIR, ARC, FABI, NICD, SASRI, MRC and NRF, and by biotech industries such as Inqaba Biotech, CapeBio, Akili Labs and BioTech Africa. Generally they are employed as:

- Managers (eg Land remediation/Laboratory manager)
- Food technologists
- Laboratory technicians
- Quality assurance specialists
- Plant pathologists
- Medical/Clinical microbiologists
- Biomedical scientists
- Bioinformaticians
- Agricultural scientists
- Scientific writers

Minimum admission requirements

Programme	Minimum requirements for NSC/IEB for 2025			
	Achievement level			APS
	English Home Language or English First Additional Language	Mathematics	Physical Sciences	
Bachelor of Science *Microbiology* [3 years]	5	5	5	**32**

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

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	CIE IGCSE LGCSE BGCSE SGCSE O Level NSSC OL CGCE UCE NECO WAEC ZIMSEC	UK England Wales Northern Ireland	HIGCSE NSSC HL	GCE CIE NSSC AS	GCE CIE CGCE UACE WAEC ZIMSEC	IB SL	IB HL	KOMBI ABITUR	KCSE
Bachelor of Science *Food Science* 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 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	English Mathematics Physics Chemistry	C C C C	4 4 4 4	3 3 3 3	C C C C	E E E E	4 4 4 4	3 3 3 3	60-69% 60-69% 60-69% 60-69%	B B B B
Bachelor of Science *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 *Mathematics* Bachelor of Science *Applied Mathematics* Bachelor of Science *Mathematical Statistics*	English Mathematics	C B	4 5	3 2	C B	E D	4 5	3 4	60-69% 70-79%	B B+
Bachelor of Consumer Science *Clothing Retail Management* Bachelor of Consumer Science *Food Retail Management* Bachelor of Consumer Science *Hospitality Management*	English Mathematics	C D	4 3	3 3	C D	E E	4 2	3 2	60-69% 50-59%	B C+

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