Biotechnology is changing the way we ...

...treat our sick
...run our factories
...make our products
...track down criminals
...protect our livestock
...conserve our wildlife
...keep our environment clean
...grow our plants and feed our people

Man has been studying living organisms for many, many years. Today, scientists are continuing to make new discoveries and now understand better than ever before how living things work. Which is why the use of living organisms to benefit humans has reached new heights - and, this is why South Africa needs more and more individuals trained in biotechnology!

Choose a Career in Biotechnology!

Introducing:

South Africans already making a difference through biotechnology!

PUBLIC UNDERSTANDING OF
BIOTECHNOLOGY

Tiny, microscopic, living things are around us all the time. Most of these microbes are harmless and can be used to make products that benefit us. For example, wine-making uses a single-cell microbe, called yeast, to convert sugar to alcohol and carbon dioxide.

Who knows enough about micro-organisms to make us competitive at wine making internationally?

The Microbiologist!

... the biggest challenge of the job:
"Working with something that you can't see and to draw your conclusions from that!"

... career satisfaction:
"Research always involves striving towards something new and better for the company."

Meet Jeremy Eksteen, Microbiologist at Distell in Stellenbosch
BSc (Microbiology), BSc Hons (Wine Biotechnology), MSc (Wine Biotechnology)

What does Jeremy do?

Jeremy works for Distell, which makes and sells wines and spirits. Ingredients including grapes, marulas, apples and cereals go through complex processes such as fermentation, which is changing the chemical makeup of something, and distillation, which is when a substance is purified or separated.

Jeremy is an expert on the microbes used in wine and spirit making. His job is to find the best (fastest and cheapest) ways to make the Distell products, using microbes. He also helps his colleagues – who check the wines and spirits to make sure they are safe to drink according to the rules and regulations – to find solutions for problems.

What do I need to be a microbiologist?

Characteristics: A love and aptitude for science, enquiring mind and enthusiasm for solving problems
Important school subjects:
Biology, Mathematics, Physical Science
Qualifications:
NDip or BTech in Biotechnology or Food Technology (with Microbiology); BSc – Natural Sciences/ Biological and Life Sciences/Biotechnology/Microbiology/Molecular and Cell Biology or similar
Note: You need an MSc or PhD for higher positions in lecturing and research

Where can I get a job as a microbiologist?

Agricultural and industrial research organisations, food and pharmaceutical industries, beverage and fermentation companies, environmental and pollution control companies, some health care facilities, pathology practices

Related careers:
Biotechnologist, Food technologist. Specialised fields include Bacteriologist (specialising in bacteria), Virologist (specialises in viruses), or Mycologist (specialises in fungi)