

BIOLOGY

FACULTY OF SCIENCE



SCAN ME

Biology is the study of living things - how they evolved, their diversity, their structure and function, and how they interact with each other and their environment. In this major, we explore the living world, from individual cells to whole ecosystems, on land, in freshwater and in the sea. We explore the interactions between organisms and their environments, the impact of humans on nature and the options of managing biodiversity and ecosystem services in the human-dominated epoch known as the Anthropocene.

Students doing this major will learn about the structure and functioning of living cells, which are the building blocks of plants and animals. They will study the spectacular array of life inhabiting the planet, with fascinating insights into the origin and evolution of species, their diversity and their adaptations for living in a range of different environments. Third year courses extend the focus on ecology and evolution and explore complex interactions between living organisms and their environment, examining the impacts and consequences of global change. Approaches and issues in biodiversity conservation are covered, including issues such as conflicts between wildlife and humans. In our teaching we use a mix of lectures, practical classes and field trips to study biology in a changing world. We engage students in active learning and encourage critical, creative thinking that reflects diverse opinions. Our courses use the unique biodiversity of the Cape Floristic Region, where UCT is situated, and of South Africa as a lens to explore biodiversity, ecology and evolution from an African perspective that is internationally relevant.

WHO WOULD BE INTERESTED IN THIS MAJOR?

Any student wishing to contribute to biodiversity conservation, sustainable development and adaptation to global change would be interested in this major. The African continent, and southern Africa in particular, provide an exciting focus for these issues, placing diverse and unique species and habitats alongside challenging environmental and social issues.

CAREER OPPORTUNITIES FOR GRADUATES

Careers for biology graduates include research, teaching and academic posts, as well as working

in the biodiversity conservation sector, nature tourism, agriculture, forestry, fisheries, science communication and any branch of natural resource management, including the management of water, fire and alien species. Biologists are required at local, national and international levels to develop strategies for biodiversity conservation, land-use planning and the sustainable use of natural resources.

WHAT COURSES WILL YOU TAKE?

First Year Core Courses

- Cell Biology (BIO1000)
- Biological Diversity (BIO1004)
- Chemistry (CEM1000)

Either

- Mathematics (MAM1004) or Mathematics (MAM1000)
- Introductory Statistics for Scientists (STA1007)

Second Year Core Courses

- Principles of Ecology & Evolution (BIO2014)

Two of:

- Vertebrate Diversity & Functional Biology (BIO2015)
- Invertebrate Diversity & Functional Biology (BIO2016)
- Plant Diversity & Functional Biology (BIO2017)
- Recommended:
- Study Design & Data Analysis for Scientists (STA2007)

Third Year Core Courses

Students are required to take two of the following four options:

- Global Change Ecology (BIO3013)
- Conservation: Genes, Populations & Biodiversity (BIO3014)
- Ecology and Evolution (BIO3018)
- Quantitative Biology (BIO3019s)

MINIMUM ADMISSION AND SUBJECT REQUIREMENTS

FPS of 550 (but admission only guaranteed at FPS above 660)

Mathematics 70% & Physical Science 60%
NBT in Mathematics, AL & QL to be written

