

Careers in Botany

South Africa has a serious shortage of skilled professionals and trained technicians in the plant industry.

If you care for biodiversity and conservation in South Africa,

if you have an interest in nature,

if you like to be outdoors in the wild or in a garden,

if you have an inquiring mind and like to observe, study and research nature,

if you like to work with plants,

if you like teaching others and talking about plants,

if you get a kick out of plants and flowers,

....then you will enjoy a career in botany.

Employment opportunities include:

Scientific careers, specialising in:

- **alien invader plants** – problem plants from other countries
- **climate change** – the effects of human activities on climate
- **conservation** – how to conserve natural areas in a changing world
- **conservation planners and policy-makers** – writing & reviewing conservation legislation and management plans
- **crop science** – developing new crops and improving existing crops
- **ecology** – plants and animals in their natural environment
- **EIAs** – compiling Environmental Impact Assessments
- **ethnobotany** – studying the uses of plants for food, fibre, medicine and other purposes
- **genetics** – researching new genetic strains & the effects of genetically modified organisms on natural populations
- **GIS and conservation planning** – mapping important areas and their threats
- **herbarium curation** – the maintenance and management of scientific collections of plants
- **molecular systematics** – using DNA to study the relationships between different plants or animals
- **paleobotany** – the study of fossil plants
- **plant pathology** – the study of plant diseases
- **systematics** – the relationships between plants
- **taxonomy** – the identification and naming of organisms
- **threatened species** – listing rare species & identifying the threats driving these organisms to extinction

Commercial horticulture has a number of different options:

- **arboriculture** – specializing in trees, consulting on trimming of trees and tree diseases
- **cultivation and maintenance** of plants in a nursery or garden situation; the hands-on involvement in gardens
- **landscape rehabilitation** – restoring environmental damage caused by erosion, fire, development and land management practices.
- **landscaping** - planning and design of garden areas, with an aesthetic, interpretative and educational focus
- **plant breeding** – developing new plant varieties
- **plant nursery management** – managing the wholesale and retail side in the business of plants
- **plant production** - growing good quality plants for sale, promotion or planting
- **plant propagation** - producing plants from seed, cuttings and by other methods

Other plant-related career options:

- **herbal healing** – utilizing the healing powers of plants, as a naturopath, aromatherapy practitioner, a sangoma or homeopath
- **farming** – producing food through the cultivation of crops
- **florist** – selling cut flowers, producing flower displays
- **botanical art** – a specialized direction of art, drawing plants in their finest detail for publication
- **teachers & environmental educators** co-ordinate school programmes, create and develop the resources needed for lessons and workshops; facilitate teacher workshops and assist in the development of school and community projects and their uses in the school curriculum.
- **tourist & nature guides** – take visitors on guided walks and drives in national parks, game reserves and other natural areas and interpret nature to the guests
- **information, journalism & publicity** – communicating and writing about plant-related issues; creative marketing to promote plants

Where will I be employed?

Government organisations, such as national parks, provincial conservation authorities, the South African National Biodiversity Institute or its the botanical gardens, the Department of Environmental Affairs and Tourism (DEAT), the Department of Water Affairs and Forestry (DWAF), the Department of Agriculture.

Municipal authorities: nurseries, reserves, parks & recreation.

Private companies, such as nurseries, private landscaping businesses, retail companies for all plant-related products, herbicide and fertiliser companies and consultancies doing Environmental Impact Assessments.

Research and scientific institutions such as SANBI (South African National Biodiversity Institute), various herbaria, the CSIR (Council for Scientific and Industrial Research), medical research institutions, ARC (Agriculture Research Institute), pharmaceutical companies.

Become self-employed as a private consultant for any of the above organisations.

What are the requirements for such a career?

Firstly an interest and passion for plants and nature.

A Senior Certificate with matriculation exemption or endorsement is required for degree studies and a Senior Certificate for diploma studies. In addition, the various tertiary institutions have their own requirements for admission (minimum subject requirements).

What further training do I need?

Begin by defining your special area of interest. Are you interested in academic studies or more practical hands-on experiential training?

For academic candidates, there are various scientific careers concentrating on specific subdisciplines. The minimum requirement is a BSc degree in Biological Sciences. With further studies, a speciality field has to be chosen.

Careers in horticulture would require a National Diploma: Horticulture and/or a National Diploma: Nature Conservation. For a career in Environmental Education, consider a degree in the Biological Sciences and a diploma or degree in Education.

Many institutions offer opportunities for in-house training, internships, volunteer / vacation work and short contract employment. Some organisations also offer internal opportunities for further study.

What about bursaries and financial support?

There are many sources of financial assistance to help students with the cost of tertiary education. Most tertiary training institutions provide financial support for prospective and registered students with academic potential. Bursaries and loans are awarded on the grounds of both academic achievement and financial need.

Where could I study?

Cape Peninsula University of Technology

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Tel: (021) 460-3188
Contact person: Mr. Peter Franck
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University of Cape Town**Department of Botany**

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Web: <http://web.uct.ac.za/depts/botany/contact.html>

Bolus Herbarium,

Contact person: Terry Trinder-Smith
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University of the Western Cape**Department of Biodiversity & Conservation Biology**

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Nelson Mandela Metropolitan University**Botany Department**

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Central University of Technology**School for Agriculture and Environmental Sciences**

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University of Fort Hare**Botany Department**

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Rhodes University**Botany Department**

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The Durban University of Technology**Student Admissions**

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University of South Africa (UNISA)**University call centre:**

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Student applications:

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**Horticulture: College of
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North-West University**Faculty of Natural Sciences**

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