

# 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**

Faculty of applied science  
PO Box 652  
CAPE TOWN  
8000, South Africa  
Tel: (021) 460-3188  
Contact person: Mr. Peter Franck  
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**University of Cape Town**

**Department of Botany**  
University of Cape Town  
University Private Bag  
RONDEBOSCH  
7700, South Africa  
Tel: (021) 650-2447  
Fax: (021) 650-4041  
Web: <http://web.uct.ac.za/depts/botany/contact.html>

**Bolus Herbarium,**

Contact person: Terry Trinder-Smith  
Botany Department,  
University of Cape Town,  
PO Rondebosch  
7701, South Africa  
Tel: (021) 650-3724  
Fax: (021) 650-4041

**University of the Western Cape**

**Department of Biodiversity & Conservation Biology**  
Private Bag X17  
BELLVILLE  
7535, South Africa  
Tel: (021) 959-2301  
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**University of Stellenbosch**

**Department of Botany & Zoology**  
University of Stellenbosch  
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7602, South Africa  
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(Dept. Secretary)  
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Fax: (021) 808-2405  
Web: <http://academic.sun.ac.za/botzoo/contactus.htm>

**University of Stellenbosch**

**Department of Horticultural Science**

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Tel: (021) 808-4900  
Fax: (021) 808-2121  
Web: <http://academic.sun.ac.za/horticulture/index.htm>

**Application and Registration:**

Enquiries : Stellenbosch Campus  
Tel: (021) 808-4546  
Fax: (021) 808-3822

**Nelson Mandela Metropolitan University**

**Botany Department**

PO Box 77000  
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**Central University of Technology**

**School for Agriculture and Environmental Sciences**

Private Bag X20539  
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switchboard  
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**University of the Free State**

**Department of Plant Sciences**

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Sciences  
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**General, Study Programmes and Faculty Enquiries**

E-mail: [dean.sci@mail.uovs.ac.za](mailto:dean.sci@mail.uovs.ac.za)  
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**University of Fort Hare**

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**Rhodes University****Botany Department**

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**The Durban University of Technology****Student Admissions**

PO Box 1334  
DURBAN  
4000, South Africa

**Durban Campus**

Tel: (031) 204-2111  
Fax (031) 204-2265

**Pietermaritzburg Campus**

Tel: (033) 845-8800  
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Toll-Free number: 086 010 3194  
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**University of KwaZulu-Natal****Faculty of Science and Agriculture**

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3209, South Africa  
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Fax: (033) 260-5969  
Web: [www.ukzn.ac.za](http://www.ukzn.ac.za)

**University of Zululand****Department of Botany**

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**University of the Witwatersrand****Animal, Plant and Environmental Science**

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**University of Johannesburg**

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559 2911

**Department of Botany and Plant Biotechnology**

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**University of Pretoria****Faculty of Natural and Agricultural Sciences**

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**Schweickert Herbarium**  
Tel: (012) 420 4784  
Fax (012) 420 2057

**Tshwane University of Technology**

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0001, South Africa  
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110 2422  
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**Department of Crop Science:**

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

0861 670 411 (Nationally)  
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service

**Student applications:**

PO Box 392  
UNISA  
0003, South Africa

**Horticulture: College of  
Agriculture and Environmental  
Sciences**

Private Bag X6  
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**North-West University****Faculty of Natural Sciences**

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[http://www.puk.ac.za/fakultei/natuur/index\\_e.html](http://www.puk.ac.za/fakultei/natuur/index_e.html)

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**School of Molecular and life  
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