

# NATIONAL DIPLOMA: HORTICULTURE

## Qualification code: NDHO04 - NQF Level 6

Campus where offered: Pretoria Campus

### Important notification to new applicants:

Students who intend to enrol for this qualification for the first time in 2017 or thereafter, should note that it will not be possible to continue with any Baccalaureus Technologiae as from 2020, since it is being replaced by qualifications aligned with the newly-implemented Higher Education Qualification Sub-Framework. Potential students are advised to consult the University's website for any new qualifications which might not be published in this Prospectus.

## REMARKS

a. *Admission requirement(s) and selection criteria:*

### • FOR APPLICANTS WHO OBTAINED A SENIOR CERTIFICATE BEFORE 2008:

#### **Admission requirement(s):**

A Senior Certificate or an equivalent qualification with an E symbol at Higher Grade or a D symbol at Standard Grade for English, Mathematics, Physical Science or Biology.

#### **Recommended subjects:**

Agricultural Sciences and Geography.

#### **Selection criteria:**

Assessment is based on the normal M score with a weighted Swedish scale.

<b>SYMBOL</b>	<b>HG VALUE</b>	<b>SG VALUE</b>
A	6	5
B	5	4
C	4	3
D	3	2
E	2	1

A minimum of 24 points are required with bonus points for Biology, Geography, Agriculture, etc. A maximum of six bonus points can be awarded, and two bonus points can also be awarded for prior experience.

### • FOR APPLICANTS WHO OBTAINED A NATIONAL SENIOR CERTIFICATE IN OR AFTER 2008:

#### **Admission requirement(s):**

A National Senior Certificate with a bachelor's degree or a diploma endorsement, or an equivalent qualification, with an achievement level of at least 4 for English (home language or first additional language) and 3 for Mathematics or 4 for Mathematical Literacy and 3 for Life Sciences or 3 for Physical Sciences.

#### **Selection criteria:**

To be considered for this qualification, applicants must have an Admission Point Score (APS) of at least **19** (with Mathematics) or **20** (with Mathematical Literacy).

#### **Assessment procedures:**

Applicants with a score of 20 (19 with Mathematics) will be considered for admission.

b. *Minimum duration:*  
Three years.

c. *Presentation:*  
Day classes.



- d. *Intake for the qualification:*  
January only.
- e. *Exclusion and readmission:*  
See Chapter 2 of Students' Rules and Regulations.
- f. *Recognition of Prior Learning (RPL), equivalence and status:*  
See Chapter 30 of Students' Rules and Regulations.
- g. *Work-Integrated Learning I and II:*  
Structured Work-Integrated Learning programme at Booyens Nursery Training Centre, or Industry, or at the University. Placement in industry will be subjected to departmental evaluation and approval. See Chapter 5 of Students' Rules and Regulations for further details.
- h. *Subject credits:*  
Subject credits are shown in brackets after each subject.

Key to asterisks:

- \* Information does not correspond to information in Report 151.  
(Deviations approved by the Senate in August 2005.)

## CURRICULUM

### FIRST YEAR

CODE	SUBJECT	CREDIT	PREREQUISITE SUBJECT(S)
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#### FIRST SEMESTER

ERT111T	Environmental Studies I	(0,090)	
GMT101T	Growth Media Technology I	(0,070)	
HOR111T	Horticulture I	(0,090)	
PLR101T	Plant Material Studies I	(0,090)	
SMN101T	Supervisory Management I	(0,090)	
TEB101T	Site Planning I	(0,070)	

TOTAL CREDITS FOR THE SEMESTER: 0,500

#### SECOND SEMESTER

HMH101T	Horticultural Mechanisation I	(0,070)	
HMN211T	Horticultural Management II	(0,133)	Supervisory Management I
HOR211T	Horticulture II	(0,133)	Horticulture I
PLR201T	Plant Material Studies II	(0,094)*	Plant Material Studies I
TGC101T	Turfgrass Culture I	(0,070)	

TOTAL CREDITS FOR THE SEMESTER: 0,500

TOTAL CREDITS FOR THE FIRST YEAR: **1,000**

### SECOND YEAR

CODE	SUBJECT	CREDIT	PREREQUISITE SUBJECT(S)
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ERT200T	Environmental Studies II	(0,125)	Environmental Studies I
HOR310T	Horticulture III	(0,300)	Horticulture II
HPM300T	Horticultural Production Management III	(0,300)	Horticultural Management II
PEC210T	Plant Protection II	(0,125)	
PLR300T	Plant Material Studies III	(0,150)	Plant Material Studies II

TOTAL CREDITS FOR THE SECOND YEAR: **1,000**



**THIRD YEAR**

On completion of all the above subjects.

CODE	SUBJECT	CREDIT	PREREQUISITE SUBJECT(S)
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**FIRST SEMESTER**

One of the following:

EXB1HOR	Work-Integrated Learning I (Booyens)	(0,500)	
EXP1HOR	Work-Integrated Learning I (Industry)	(0,500)	
EXT1HOR	Work-Integrated Learning I (TUT)	(0,500)	

**SECOND SEMESTER**

One of the following:

EXB2HOR	Work-Integrated Learning II (Booyens)	(0,500)	
EXP2HOR	Work-Integrated Learning II (Industry)	(0,500)	
EXT2HOR	Work-Integrated Learning II (TUT)	(0,500)	

TOTAL CREDITS FOR THE THIRD YEAR: **1,000**TOTAL CREDITS FOR THE QUALIFICATION: **3,000****SUBJECT/MODULE INFORMATION (OVERVIEW OF SYLLABUS)**

The syllabus content is subject to change to accommodate industry changes. Please note that a more detailed syllabus is available at the Department or in the study guide that is applicable to a particular subject/module. On 01 August 2017, the syllabus content was defined as follows:

**E****ENVIRONMENTAL STUDIES I (ERT111T) 1 X 3-HOUR PAPER***(Subject custodian: Department of Horticulture)*

The natural environment, ecology and ecosystems, the human environment. (Total tuition time: ± 45 hours)

**ENVIRONMENTAL STUDIES II (ERT200T) 1 X 3-HOUR PAPER***(Subject custodian: Department of Horticulture)*

Environmental conservation, land use and environmental protection, environmental legislation, environmental impact studies, environmental planning and reclamation practices. (Total tuition time: ± 60 hours)

**G****GROWTH MEDIA TECHNOLOGY I (GMT101T) 1 X 3-HOUR PAPER***(Subject custodian: Department of Horticulture)*

Characteristics of soil as growth medium. Nutrient management of growth. Soilless growth media. (Total tuition time: ± 35 hours)

**H****HORTICULTURAL MANAGEMENT II (HMN211T) 1 X 3-HOUR PAPER***(Subject custodian: Department of Horticulture)*

Production and operations management, marketing management, public relations, financial management, costing and purchasing. (Total tuition time: ± 65 hours)



**HORTICULTURAL MECHANISATION I (HMH101T)****1 X 3-HOUR PAPER****(Subject custodian: Department of Horticulture)**

Principles and operation of the basic power units applicable to horticulture. Introduction to horticultural mechanisation: materials, tools and related tractor performance. Soil preparation machinery: types of engine system components of related horticultural implements. Specialised horticultural equipment: specialised turfgrass machinery and horticultural equipment, as well as hothouse equipment. Horticultural mechanisation planning: the planning for purchasing and managing horticultural machinery. (Total tuition time: ± 35 hours)

**HORTICULTURAL PRODUCTION MANAGEMENT III (HPM300T)****1 X 3-HOUR PAPER****(Subject custodian: Department of Horticulture)**

Garden centre management, including merchandising, customer relations, marketing, benchmarking, financial management. Labour relations, including South African labour legislation, workplace behaviour, handling grievances and disciplinary and dispute procedures, collective bargaining and industrial action. (Total tuition time: ± 90 hours)

**HORTICULTURE I (HOR111T)****1 X 3-HOUR PAPER****(Subject custodian: Department of Horticulture)**

Introduction to the industry, growth media and container growing systems, nutrient management, propagation methods, seeds, cuttings, layering, grafting, budding and micropropagation. (Total tuition time: ± 45 hours)

**HORTICULTURE II (HOR211T)****1 X 3-HOUR PAPER****(Subject custodian: Department of Horticulture)**

Nursery management, production in the nursery, flower forcing, growth regulators, CO<sub>2</sub> injection, pruning, hydrocultures. (Total tuition time: ± 65 hours)

**HORTICULTURE III (HOR310T)****1 X 3-HOUR PAPER****(Subject custodian: Department of Horticulture)**

Propagation, cultivation, harvesting and marketing practices and procedures of bedding plants, cut flowers, herbs, trees, bulbs, indoor plants and orchids. (Total tuition time: ± 90 hours)

**P****PLANT MATERIAL STUDIES I (PLR101T)****1 X 3-HOUR PAPER****(Subject custodian: Department of Horticulture)**

External morphology, anatomy and physiology, taxonomy, characteristics and requirements of ornamental plants, indigenous, exotic and endemic plants, plant appearance and identification, emphasis on trees, shrubs and ground covers. (Total tuition time: ± 45 hours)

**PLANT MATERIAL STUDIES II (PLR201T)****1 X 3-HOUR PAPER****(Subject custodian: Department of Horticulture)**

Requirements of ornamental plant material, factors in the selection of plants, transplanting procedures, pruning techniques, maintenance programmes, lists of indigenous and exotic plants. Emphasis on annuals and perennials, climbers, vines, grasses, fruit, vegetables and herbs. (Total tuition time: ± 45 hours)

**PLANT MATERIAL STUDIES III (PLR300T)****1 X 3-HOUR PAPER****(Subject custodian: Department of Horticulture)**

Tree and shrub morphology. Tree and shrub families. Application of ornamental plants in the landscape. Lists of plants for sun, shade and semi-shade. Creepers and climbers. The development of a garden maintenance programme. General garden pests and diseases. Functional and visual uses of plants in the landscape. Lists of indigenous and exotic ornamentals, trees and shrubs with their applications in the landscape. (Total tuition time: ± 75 hours)

**PLANT PROTECTION II (PEC210T)****1 X 3-HOUR PAPER****(Subject custodian: Department of Horticulture)**

Entomology, pest management, review of major South African pests, weed management, nematology, plant pathology. (Total tuition time: ± 60 hours)



**S****SITE PLANNING I (TEB101T)****CONTINUOUS ASSESSMENT****(Subject custodian: Department of Horticulture)**

Historical outline, legislation, principles and processes, site investigation, site design, drawing techniques and site construction. (Total tuition time: ± 35 hours)

**SUPERVISORY MANAGEMENT I (SMN101T)****1 X 3-HOUR PAPER****(Subject custodian: Department of Horticulture)**

The business environment, entrepreneurship, establishing a business, the main management tasks including planning, organising, leading and control, secondary management tasks including communication and delegation. (Total tuition time: ± 45 hours)

**T****TURFGRASS CULTURE I (TGC101T)****1 X 3-HOUR PAPER****(Subject custodian: Department of Horticulture)**

Construction of turfgrass facilities, propagation and establishment techniques, culture practices, equipment, machinery and techniques. Introduction to turfgrass culture. Turfgrass propagation methods. Turfgrass establishment techniques. Introduction to primary cultural practices, supplementary cultural practices and turf pest control. Turfgrass identification. (Total tuition time: ± 35 hours)

**W****WORK-INTEGRATED LEARNING I (BOOYSENS) (EXB1HOR)****WORK-INTEGRATED LEARNING****WORK-INTEGRATED LEARNING II (BOOYSENS) (EXB2HOR)****WORK-INTEGRATED LEARNING****(Subject custodian: Department of Horticulture)**

Ornamental horticultural practices. Work-integrated learning is done by an accredited institution and overseen by its mentors. A compulsory accredited syllabus is followed and students are evaluated on a continuous basis by writing tests and doing various assignments and/or projects. At the end of the period a final mark is awarded. (Total tuition time: six months)

**WORK-INTEGRATED LEARNING I (INDUSTRY) (EXP1HOR)****WORK-INTEGRATED LEARNING****WORK-INTEGRATED LEARNING II (INDUSTRY) (EXP2HOR)****WORK-INTEGRATED LEARNING****(Subject custodian: Department of Horticulture)**

Ornamental horticultural practices. Work-integrated learning is done with an accredited employer and overseen by a mentor and a departmental lecturer. A compulsory accredited syllabus is followed and two reports (progress and final report) must be submitted. Students might be visited at their places of employment. A final oral examination is also taken at the end of the period. (Total tuition time: six months)

**WORK-INTEGRATED LEARNING I (TUT) (EXT1HOR)****WORK-INTEGRATED LEARNING****WORK-INTEGRATED LEARNING II (TUT) (EXT2HOR)****WORK-INTEGRATED LEARNING****(Subject custodian: Department of Horticulture)**

Ornamental horticultural practices. Work-Integrated Learning is done at TUT and overseen by its mentors. An accredited syllabus is followed. Practical tasks are performed on the TUT campuses. Students are evaluated on a continuous basis by writing tests and doing various assignments and/or projects. At the end of the period, a final mark is awarded. (Total tuition time: six months)

