

## DIPLOMA IN HORTICULTURE

Dip (Horticulture) - NQF Level 6 (360 credits)

**Qualification code: DPHO20**

SAQA ID: 100983, CHE NUMBER: H16/14298/HEQSF

Campus where offered:

Pretoria Campus

### REMARKS

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

• **FOR APPLICANTS WITH A SENIOR CERTIFICATE OBTAINED 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, and Physical Science or Biology.

**Recommended subject(s):**

Agricultural Sciences.

**Selection criteria:**

To be considered for this qualification, applicants must have an Admission Point Score (APS) of at least **24**.

• **FOR APPLICANTS WITH A NATIONAL SENIOR CERTIFICATE OBTAINED 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), 3 for Mathematics or Technical Mathematics or 4 for Mathematical Literacy, and 3 for Life Sciences or 3 for Physical Sciences or Technical Sciences.

**Recommended subject(s):**

None.

**Selection criteria:**

To be considered for this qualification, applicants must have an Admission Point Score (APS) of at least **25** (with Mathematics or Technical Mathematics) or **26** (with Mathematical Literacy).

b. *Assessment procedure(s):*

Applicants with the minimum APS will be considered for admission until the programme complement is full.

Acceptance is subject to available capacity according to the Student Enrolment Plan (SEP). Once a programme is full, a waiting list will be in place to provide an opportunity for applicants to fill places of those who did not register on time. Applicants will be informed of their status per official letter from the Office of the Registrar, alternatively, they can check their application status on the TUT website, [www.tut.ac.za](http://www.tut.ac.za).

c. *Recognition of Prior Learning (RPL), equivalence and status:*

See Chapter 30 of Students' Rules and Regulations.

d. *Intake for the qualification:*

January only.

e. *Presentation:*

Day classes.



- f. *Minimum duration:*  
Three years.
- g. *Exclusion and readmission:*  
See Chapter 2 of Students' Rules and Regulations.
- h. *WIL Horticulture:*  
See Chapter 5 of Students' Rules and Regulations.

## CURRICULUM

### FIRST YEAR

CODE	MODULE	NQF-L	CREDIT	PREREQUISITE MODULE(S)
11P105X	Communication for Academic Purposes	(5)	(10)	
BOT105D	Botany I	(5)	(24)	
CPL105X	Computer Literacy	(5)	(10)	
EMP105D	Environmental Practices I	(5)	(18)	
HRP105D	Horticulture and Nursery Practice I	(5)	(30)	
INI125D	Information Literacy I (block module)	(5)	(2)	
LF1125X	Life Skills I (block module)	(5)	(2)	
MST105X	Mathematics and Statistics	(5)	(12)	
SOI105D	Science for Occupational Purposes	(5)	(12)	
TOTAL CREDITS FOR THE FIRST YEAR:			<b>120</b>	

### SECOND YEAR

CODE	MODULE	NQF-L	CREDIT	PREREQUISITE MODULE(S)
1SU206D	Plant Studies II	(6)	(24)	Botany I
BSP206D	Business Practice I	(6)	(12)	
EMP206D	Environmental Practices II	(6)	(18)	Environmental Practices I
HRP206D	Horticulture and Nursery Practice II	(6)	(42)	Horticulture and Nursery Practice I
LMT206D	Landscape Maintenance I	(6)	(24)	
TOTAL CREDITS FOR THE SECOND YEAR:			<b>120</b>	

### THIRD YEAR

CODE	MODULE	NQF-L	CREDIT	PREREQUISITE MODULE(S)
<b>FIRST SEMESTER</b>				
1SU316D	Plant Studies III	(6)	(18)	Plant Studies II
HNP316D	Horticulture and Nursery Practice Management II	(6)	(12)	Business Practice I
HRP316D	Horticulture and Nursery Practice III	(6)	(30)	Horticulture and Nursery Practice II
TOTAL CREDITS FOR THE SEMESTER:			<b>60</b>	



## SECOND SEMESTER

### After completion of all modules.

Students register for one of the following Work-Integrated Learning options. WHI316D is subject to Industry memorandum of understanding (MOA). Placement for WIL is subjected to a departmental evaluation and approval.

WHI316D	WIL Horticulture	(6)	(60)
WHO316D	WIL Horticulture	(6)	(60)

TOTAL CREDITS FOR THE SEMESTER: 60

TOTAL CREDITS FOR THE THIRD YEAR: 120

TOTAL CREDITS FOR THE QUALIFICATION: 360

## 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 module. At time of publication, the syllabus content was defined as follows:

### B

#### **BOTANY I (BOT105D)**

1 X 3-HOUR PAPER

*(Module custodian: Department of Horticulture)*

The role of plants in the living world. The plant Kingdom, endemic, indigenous, exotic, history and development. Plant classification. Classification systems. Morphology of higher plants. Seed, roots, stems, leaves, inflorescences, flowers, fruit. Anatomy of higher plants. Plant cells and cellular components, roots, stems and leaves. Plant physiology. Photosynthesis, respiration. Transpiration and water movement in the plant. Transpiration and water movement, mineral uptake and sugar translocation. (Total notional time: 240 hours)

#### **BUSINESS PRACTICE I (BSP206D)**

1 X 3-HOUR PAPER

*(Module custodian: Department of Management and Entrepreneurship)*

Introduction to the business world, marketing orientation, non-verbal and verbal communication, written business communication, professional ethics, selling techniques, sales administration. (Total notional time: 120 hours)

### C

#### **COMMUNICATION FOR ACADEMIC PURPOSES (11P105X)**

1 X 3-HOUR PAPER

*(Module custodian: Office of the Executive Dean)*

A workable knowledge of English is an essential skill for any graduate who is required to conduct themselves successfully in a professional working environment. This module will equip students with the competencies required to compose a selection of written texts related to communicating both internally and externally within a professional environment. In addition, the module includes strategies that are essential for the effective communication in various situations, including small groups to avoid unproductive conflict, a multicultural context, etc. (Total notional time: 100 hours)

#### **COMPUTER LITERACY (CPL115X)**

CONTINUOUS ASSESSMENT

*(Module custodian: End User Computing Unit)*

This module provides students with foundational knowledge in computing fundamentals, essential digital skills in key applications based on MS Office Suite and network basics (i.e. MS Outlook and Internet). Online exams are mapped with End-User Computing: SAQA 49077 (61591) Core Element as well as Internet and Computing Core Certification (IC3). (Total notional time: 100 hours)



**E****ENVIRONMENTAL PRACTICES I (EMP105D)****CONTINUOUS ASSESSMENT****(Module custodian: Department of Horticulture)**

The Ecosystem. Cultural-ecological systems. The soil. The functioning of environmental systems. The environment as a resource. The human influence. Environmental pollution. (Total notional time: 180 hours)

**ENVIRONMENTAL PRACTICES II (EMP206D)****CONTINUOUS ASSESSMENT****(Module custodian: Department of Horticulture)**

Environmental issues and their relevance to South Africa. Urbanisation. Environmental management. Environmental Impact assessment (EIA). Rehabilitation and reclamation. Environmental legislation. (Total notional time: 180 hours)

**H****HORTICULTURE AND NURSERY PRACTICE I (HRP105D)****1 X 3-HOUR PAPER****(Module custodian: Department of Horticulture)**

Introduction to site planning and nursery design Site selection. Growth Media. Characteristics, Types, Maintenance and care, Soilless growth. Sexual Propagation. Pollination and fertilization, Seed Vegetative propagation. Specialised plant structures and micro propagation. (Total notional time: 300 hours)

**HORTICULTURE AND NURSERY PRACTICE II (HRP206D)****1 X 3-HOUR PAPER****(Module custodian: Department of Horticulture)**

Propagation and cultivation structures. Types of greenhouse structures, Planning and construction of greenhouses. Greenhouse management. Application of environmental regulation for plant production in the greenhouse environment. Nutrient and water management in a nursery environment. Greenhouse and nursery sanitation. Plant growth manipulation. Plant growth responses. Plant disorders. (Total notional time: 420 hours)

**HORTICULTURE AND NURSERY PRACTICE III (HRP316D)****1 X 3-HOUR PAPER****(Module custodian: Department of Horticulture)**

Cut flowers. Types of cut flowers (annuals, perennials, geophytes), production requirements; harvesting, handling and post-harvest care; marketing and the cut flower trade. Bedding plants, herbs and medicinal plants. Types of bedding plants, herbs and medicinal plants (including uses), propagation and production requirements, scheduling, hardening, harvesting, processing and post-production care; marketing. Trees and ornamentals. Tree selection, production of trees, site selection and layout; pruning, transplanting and maintenance. Indoor plants. (Total notional time: 300 hours)

**HORTICULTURE AND NURSERY PRACTICE MANAGEMENT II (HNP316D)****1 X 3-HOUR PAPER****(Module custodian: Department of Horticulture)**

Human resource management. Including labour relations, job descriptions and specifications, human resource planning, personnel motivation, training and development, performance appraisal, remuneration and delegation, communication, labour and relations and supervision and compilation of a basic health and safety file. Contract management. Including definitions, types and importance of contracts, formulation of contracts and contract clauses. Tenders and bill of quantities. Definitions and types of tenders, designing and completing tender documents. (Total notional time: 120 hours)

**I****INFORMATION LITERACY I (INI125D)****CONTINUOUS ASSESSMENT****(Module custodian: Directorate of Library and Information Services)**

Introduction of information literacy. Development of a search strategy and application of a search string to search engines and academic databases. Evaluation of information sources. Ethical and legal use of information. (Total notional time: 20 hours)

**L****LANDSCAPE MAINTENANCE I (LMT206D)****CONTINUOUS ASSESSMENT****(Module custodian: Department of Horticulture)**

Plant nutrition and fertilizing. Plant protection. Turf grass culture. Machines and hand tools. General standards and norms. (Total notional time: 240 hours)



**LIFE SKILLS I (LFI125X)****CONTINUOUS ASSESSMENT****(Module custodian: Directorate of Student Development and Support)**

Personal, socio-emotional and academic skills development for students in higher education. This module includes: 1. Intra- and interpersonal skills (e.g. emotional intelligence, relationships, and conflict management); 2. General study skills (e.g. time management, goal setting, learning styles); 3. Health and wellness (e.g. HIV/AIDS, GBV issues, substance abuse); 4. Student life and adjustment (e.g. identity development, adjusting to a higher education environment); and 5. Financial management. (Total notional time: 20 hours)

**M****MATHEMATICS AND STATISTICS (MST105X)****1 X 3-HOUR PAPER****(Module custodian: Department of Mathematics and Statistics)**

Numerical computations, mensuration, equations, functions, descriptive statistics, linear regression and curve fitting. (Total notional time: 120 hours)

**P****PLANT STUDIES II (1SU206D)****CONTINUOUS ASSESSMENT****(Module custodian: Department of Horticulture)**

Plant classification, definitions and terminology: Annuals and perennials. Geophytes. Groundcovers and climbers. Succulents. Ornamental grasses, reeds and sedges. Herbs and medicinal plants. Shrubs. Trees (fruit and ornamental). Vegetables (exotic and traditional). (Total notional time: 240 hours)

**PLANT STUDIES III (1SU316D)****CONTINUOUS ASSESSMENT****(Module custodian: Department of Horticulture)**

Functional uses of plants. Visual uses of plants. Plants for specific uses. Plant groupings. Plant biodiversity and habitat development. (Total notional time: 180 hours)

**S****SCIENCE FOR OCCUPATIONAL PURPOSES (SOI105D)****1 X 3-HOUR PAPER****(Module custodian: Department of Chemistry)**

The role and importance of chemistry in everyday life. Classification and properties of matter. Atoms, molecules and ions. General properties of aqueous solutions and reactions in aqueous solutions. Motion. Forces. Energy and power. Density. Pressure. Temperature and heat. Basic Electricity. Basic Magnetism. Waves. (Total notional time: 120 hours)

**W****WIL HORTICULTURE (WHI316D, WHO316D)****WORK-INTEGRATED LEARNING****(Module custodian: Department of Horticulture)**

Propagation of annuals. Preparation seed, germination mix, sanitation. Seed sowing techniques. Pricking out and transplanting, annual identification. Vegetative propagation. Preparation of propagation medium, greenhouse sanitation, propagation by cuttings: different types. Cultivation and maintenance of cuttings, disease and pest management, transplanting rooted cuttings. Interior plantscaping. Maintenance of office plants, maintenance of greenhouse plants, transplanting, fertilizer application, pest control sanitation. Propagation, cultivation and maintenance of plants (trees, shrubs, perennials, grasses, groundcovers, etc.). Seed harvesting and sowing, transplanting and division. Maintenance and fertilizing, plants, batching, staking, pruning, mulching, sanitation. Identification of plants. Identification: trees, palms, shrubs, perennials, ground covers, climbers, ornamental grasses, indoor foliage plants, etc. Related horticultural practices, pest and disease management, greenhouse management, irrigation, hydroponics. Research. Research projects, data collection, report writing etc. Basic management and record-keeping. WHI316D is subject to Industry memorandum of understanding (MOA). (Total notional time: 600 hours)

