



INTERNATIONAL  
AGRICULTURAL  
ACADEMY  
FOR AFRICA

National Diploma  
**Plant Production**

SAQA ID 49010

STUDY PROSPECTUS  
2022/2023



# NATIONAL DIPLOMA PLANT PRODUCTION

## COURSE OVERVIEW

### National Diploma: Plant Production | NQF 5, SAQA ID 49010

The i3A National Diploma in Plant Production is an academic online programme supported by practical hands-on modules, developed for the South African Agricultural Industry. The qualification focuses on operational agronomics and crop production skills within the framework of the sciences of chemistry and physics, plant biology, business numeracy, and communication.

The i3A two-year National Diploma in Plant Production will enable qualifying students to actively participate in primary crop production, whilst enhancing the overall agrarian process and gaining opportunities to access local, national and international agricultural markets. Competency will be obtained in specialised sub-fields of Crop Production, depending the client's specific requirements (i.e., dry land crops, vegetable crops and irrigated crop production) with a strong focus on management and technical knowledge.

On completion, students will be well positioned to extend learning and practice into other sub-fields such as Animal Production, Mixed Farming and Farm Management.

## WHAT YOU STUDY

### First Year modules

1. Communication skills
2. Basic computer skills
3. Applied Mathematics and Statistics I
4. Agricultural Sciences
5. Introduction to Agri Engineering and Technology
6. Agricultural Management I
7. Plant Production I

### Second Year modules

1. Farm Business
2. Agricultural Economics
3. Plant Production II
4. Grazing and Pasture Sciences
5. Agricultural Engineering Technology II



# NATIONAL DIPLOMA PLANT PRODUCTION

## ADMISSION REQUIREMENTS

The following minimum admission requirements will be required to enter for the National Diploma:

- National Senior Certificate (Grade 12), or National Certificate (Vocational) that allows entrance to Diploma or Higher Certificate studies
- Minimum Application Point of 20
- English tuition language with a minimum achievement level 3 (40%)
- Mathematical Literacy with a minimum achievement level 4 (50%), or
- Mathematics with a minimum achievement level 2 (30%)

## CURRICULUM LAYOUT

### First Year:

#### Introductory Module

- Induction Course: Introduction to Agripedia

#### Module 1: Communication skills

- Garcias: Introduction to the Mental Approach to Farming
- Learning approach and processes
- Engage in sustained oral communication and evaluate spoken texts
- Apply comprehension skills to engage written texts in a business environment / use language and communication in occupational learning programmes
- Interpret a variety of literary texts / interpret and use information from texts
- Accommodate audience and context needs in oral communication & apply comprehension skills to engage oral texts in a business environment
- Write texts for a range of communicative contexts. Read, analyse and respond to a variety of texts.
- The Farm Plan: Implementing integrated farm layout and site selection

#### Module 2: Basic computer skills

- Work with spreadsheets & Ensure spreadsheet integrity to enhance reliability
- Manage electronic mail in a business environment
- Review and create documents using a Graphical User Interface (GUI)-based word processor
- Use computer technology to research a computer topic & demonstrate an understanding of the principles of the internet and the world-wide-web

#### Module 3: Applied Mathematics and Statistics I

- Introduction to Biometry and Mathematical Principles
- Statistical probabilities in hypothesis testing, confidence intervals & variances
- Implement and interpret a data collection plan
- Use mathematics to investigate and monitor financial aspects



# NATIONAL DIPLOMA PLANT PRODUCTION

- Solve problems in sequences and series and simulated situations
- Patterns and Inverses of functions
- Complex numbers in non-trivial situations

## **Module 4: Agricultural Sciences**

- Ecology and Agro Ecology
- Farming economics and agri-economic factors
- History of agricultural marketing
- Basic agricultural genetics
- Basic agricultural chemistry
- Introduction to Soil Sciences and geology
- Animal and plant biological concepts

## **Module 5: Introduction to Agri Engineering and Technology**

- Agricultural safety
- Structural materials
- Energy
- Construction processes
- Tools and Equipment
- Irrigation and water supply
- Drawings
- Measurement, calculations and calibrations

## **Module 6: Agricultural Management I**

- Introduction to farm management
- *Agricultural Economics I: Introduction to Marketing and Economics*
  - Integrate marketing plans with business processes
- Management of Natural and Sustainable Resources
  - Design a natural resource management plan
  - Manage and control resources in a sustainable manner
  - Financial management on the agri-business
  - Food Safety and Quality Management Systems
  - Human Resource Management

## **Module 7: Plant Production I**

- Introduction to plant production
- Soil Fertility and Plant Nutrition
- Plant Biology

- Plant Manipulation methods
- Propagation of plants
- Permaculture
- Organic Certification
- Crops in Hydroponics
- Pests and Weed control
- Harvesting plan
- Principles of Agronomy
- Grazing and Pasture Science
- Agro Chemicals and Chemical Applications

## Second Year:

### Module 8: Farm Business

- Planning & Business Ownership
  - Development and selection of an enterprise for farm business farm planning & Business Structures
  - Farm Record Keeping
  - Legal Entities and business types
- Operational Planning and Execution
  - Understanding Farming Operations
  - Strategic Planning
  - Operational Management Systems
  - Managing Farm Machinery
  - Understanding Farming Operations
- Production management & Sustainable Resource Management
  - Production Planning & Natural Resource Management
  - Costing and Benchmarking for decision making
  - Data Collection, interpretation and BI-System
  - Scorecards & Dashboards
  - Enterprise Budgets and cost Benchmarking

### Module 9: Agricultural Economics

- Financial management
  - The Economics of Agriculture, national and global economy climate
  - Capital Requirements
  - Cost, Profit & Breakeven
  - 
  - Cashflow & Cashflow management

- Cost Allocation & Income Statement
- Balance Sheets
- Controlling Budgets
- Interpretation of Financial Statements
- Input procurement, Purchasing and Stock control
  - Planning and Procurement of inputs
  - Warehouse Management
  - Stock Distribution & Enterprise recording

## **Module 10: Plant Production II**

- Agronomy
  - Crop Nutrition
  - Science of Germination & plant development
  - Plant Molecular Biotechnology
  - Advanced agronomic systems
- Horticulture
  - Dry land grain production
  - Irrigated grain production
  - Vegetable Production
  - Fruit and Nut Production
  - Hydroponics and Hydroponic Technology
  - Viticulture

## **Module 11: Grazing and Pasture Sciences**

- Grazing and Managements Systems
- Natural Pastures
- Cultivated Pastures
- Sustainable Land Management Systems

## **Module 12: Agricultural Engineering II**

- Irrigation, water quality & water management
- Introduction to GIS (Introduction to Information Systems)

## **SKILLS AND JOB OPPORTUNITIES**

You will develop, over the tenure of your studies, a critical understanding of agriculture in Africa in the modern era and working in a global economy. You will gain practical and relevant skills that will enable you to work in the agronomy and horticulture production sectors in South Africa.

All course content is based and supported by the latest industry developments, and these best practices will allow to you to participate meaningfully in primary crop production.



# NATIONAL DIPLOMA PLANT PRODUCTION

Graduates will be able to enter the primary agricultural workplace and establish a thriving career through hard work and commitment.

## METHODOLOGY

The National Diploma in Plant Production is presented as an exciting e-learning programme. This is done through own studies, reading and the online submission of assignments.

This is a participatory learning programme, where the student will also be able to communicate with fellow students across the country via, Agri-social, our social media platform. This platform allows for questions to be discussed, and the opportunity to upload and share interesting articles, images, and videos.

Throughout the academic year, lecturers will be available on the Agri-social platform. They are also readily accessible via email, SMS, WhatsApp or direct telephonic contact.

Theoretical studies are completed through our online Agri-learn platform and the student is provided with a practical logbook to achieve practical competencies and experiences through the student's own workplace. Where needed, students will be assisted towards practical competence through our work placement programme.

## ACADEMIC FEES

The following academic fees are applicable for 2022/2023.

Methods of payment:	Year 1 (2022): R 28 000	Year 2 (2023): R28 000
<b>At registration:</b>	R 2 000.00	R 2 000.00
<b>After registration: 50% deposit</b>	R 13 000.00	R 13 000.00
<b>At the start of the second term: (outstanding balance)</b>	R 13 000.00	R 13 000.00

## ALTERNATIVE PAYMENT ARRANGEMENT

If you are not in a financial position to pay the full quarterly amount, you may apply in writing for the payment of modules on a month to month basis. Please direct your application to: The Financial Director, [admin@i3a.co.za](mailto:admin@i3a.co.za).

## WHY i3A?

- Courses are SAQA accredited
- World class lectures and affiliated academics
- Custom designed online Agricultural Campus that includes e-learning modules and an online encyclopaedia for lifelong support

## TO FIND OUT MORE

[www.i3a.co.za](http://www.i3a.co.za)

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