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| **National Vocational Certificate in AQUAPONICS (Level 3)** |

**Level of qualification: 3**

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| --- | --- | --- |
|  | **Compulsory** | **Elective** |
| **Level 4 credits available** | **4** | **9** |
| **Level 3 credits available** | **43** | **16** |
| **Level 2 credits available** | **19** | **12** |
| **Level 1 credits available** | **None** | **None** |
| **Minimum totals required** | **68** | **18** |

**Registration date:** <entered by the Namibia Qualifications Authority>

**Scheduled review date:** <entered by the Namibia Qualifications Authority>

**Body responsible for the qualification: Namibia Training Authority - NTA**

# Purpose

This qualification recognises people who have the competencies required for performing agricultural tasks. It is awarded to people who have demonstrated the skills and knowledge required to work effectively in the agriculture industry, demonstrate knowledge in AQUAPONICS, in particular: growing technologies, basic principles of Aquaponics, crop physiology, fish physiology and reproduction, skills and knowledge in planning Aquaponics production, start, run and maintain an Aquaponics system, plant management in a mature Aquaponics system, manage nutrients, establish the Aquaculture part of the Aquaponics system, harvest fish, assemble a basic Aquaponics set up , Coordinate workforce in agriculture, maintain agricultural records, prepare an enterprise plan, conduct a Market Analysis, sell farm products, handle horticulture produces after harvest, perform storage and handling of horticulture products use and maintain power tools.

It also has the option to choose from electives to further advance skills in Aquaponics such as Assemble a basic Aquaponic system, establish a risk management system in an Aquaponics system,

Further non-core Aquaponic skills sets are offered as elective in adding value to fruit and vegetables, greenhouse crop propagation, select and recapture local organic seeds, foundation numeracy skills, such as Perform basic estimations and calculations as part of agricultural operations, plant husbandry repairs, conduct arc welding and repairs to metal structures, and organic agriculture

The entry requirements for this qualification are basic communication skills in the English language and numeracy.

This qualification leads to the National Vocational Certificate in Agriculture (Level 4).

# Regulations for the qualification

Summary of qualification requirements

This qualification will be awarded to people who are credited with a minimum of **86** credits and have met the requirements of both the compulsory and elective sections. as well as all requirements for Workplace Integrated Learning (WIL) as laid out in the National Policy on Work-Integrated Learning for Technical and Vocational Education and Training (TVET).

Detailed qualification requirements

**Com**p**ulsory Set**

*All the unit standards listed below are required.*

FIELD: Agriculture and Nature Conservation

Subfield: Agronomy and Horticulture

Domain: Horticulture

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: HYDR1 | Operate and maintain growing technology structures | 3 | 3 |
| Unit ID: AQUAP 1 | Demonstrate an understanding of basic Aquaponics principals | 3 | 3 |
| Unit ID: AQUAP 3 | Plan Aquaponics production | 4 | 4 |
| Unit ID: AQUAP 6 | Plant Management in a mature Aquaponic system | 3 | 5 |
| Unit ID: AQUAP 7 | Manage Nutrients elements in an Aquaponic system | 3 | 2 |

FIELD: Agriculture and Nature Conservation

Subfield: Agronomy and Horticulture

Domain: Plant Husbandry

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| --- | --- | --- | --- |
| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: 1322 | Demonstrate knowledge of crop physiology | 3 | 3 |

FIELD: Agriculture and Nature Conservation

Subfield: Agronomy and Horticulture

Domain: Farm Ecosystem Management

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| --- | --- | --- | --- |
| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: AQUAP 2 | Demonstrate knowledge on fish physiology and reproduction | 3 | 2 |
| Unit ID: AQUAP 8 | Start up, Run and Maintain an Aquaponic system | 3 | 3 |
| Unit ID: AQUAP 9 | Harvest fish | 3 | 2 |

FIELD: Agriculture and Nature Conservation

Subfield: Farm Management

Domain: Human Resource Management

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| --- | --- | --- | --- |
| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: 1332 | Coordinate workforce in agriculture | 3 | 2 |

FIELD: Agriculture and Nature Conservation

Subfield: Farm Management

Domain: Farm Business

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| --- | --- | --- | --- |
| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: 1326 | Apply basic financial literacy skills for agribusiness | 2 | 2 |
| Unit ID: 1327 | Demonstrate an understanding of basic economic principles of farming | 2 | 4 |
| Unit ID: FB 1 | Prepare a basic farm enterprise plan | 4 | 7 |
| Unit ID: FB2 | Conduct Market Analysis | 3 | 3 |
| Unit ID: 1334 | Sell Farm produce | 3 | 3 |

FIELD: Agriculture and Nature Conservation

Subfield: Farm Management

Domain: Record Keeping

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| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: 1335 | Maintain agricultural records | 3 | 4 |

FIELD: Agriculture and Nature Conservation

Subfield: Agronomy and Horticulture

Domain: Post-harvest storage and handling

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| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: 1324 | Handle horticultural produce after harvest | 2 | 4 |
| Unit ID: 1325 | Perform storage and handling of horticultural products | 3 | 4 |

FIELD: Agriculture and Nature Conservation

Subfield: Agronomy and Horticulture

Domain: Human Resource Management

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| --- | --- | --- | --- |
| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: 1330 | Use workplace English in agricultural operations | 2 | 2 |
| Unit ID: 1331 | Apply work ethics | 2 | 4 |

FIELD: Agriculture and Nature Conservation

Subfield: Farm management

Domain: Numeracy skills

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| --- | --- | --- | --- |
| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: FNS2 | Perform basic estimations and calculations as part of agricultural operations | 2 | 2 |

FIELD: Agriculture and Nature Conservation

Subfield: Agronomy and Horticulture

Domain: Operate machinery, tools and equipment

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| --- | --- | --- | --- |
| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: 1383 | Use and maintain hand and power farm tools | 2 | 2 |

**Electives sets**

A minimum of 18 credits from the list is required from the following unit standards.

FIELD: Agriculture and Nature Conservation

Subfield:

Domain: Water supplies

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| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: AQUAP 4 | Assemble a basic Aquaponic setup | 4 | 9 |

FIELD: Agriculture and Nature Conservation

Subfield: Agronomy and Horticulture

Domain: Farm Ecosystem Management

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| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: AQUAP 10 | Establish a risk management system in an Aquaponics system | 4 | 3 |

FIELD: Agriculture and Nature Conservation

Subfield: Agronomy and Horticulture

Domain: Horticulture

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| --- | --- | --- | --- |
| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: 1302 | Coordinate greenhouse crop production tasks | 3 | 5 |

FIELD: Agriculture and Nature Conservation

Subfield: Agronomy and Horticulture

Domain: Plant Husbandry

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| --- | --- | --- | --- |
| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: ORG2 | Select and recapture local organic seeds | 2 | 2 |
| Unit ID: 1313 | Propagate Plants | 2 | 2 |
| Unit ID: 1309 | Demonstrate knowledge of the economic and social contribution of agronomic and horticulture industry in Namibia | 2 | 2 |

FIELD: Agriculture and Nature Conservation

Subfield: Agronomy and Horticulture

Domain: Operate machinery, tools and equipment

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| --- | --- | --- | --- |
| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID:1387 | Conduct basic arc welding and repair of metal structures | 2 | 3 |

FIELD: Agriculture and Nature Conservation

Subfield: Organic Farming

Domain: Organic Agriculture

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| --- | --- | --- | --- |
| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: ORG1 | Demonstrate understanding of organic agriculture | 2 | 2 |

FIELD: Agriculture and Nature Conservation

Subfield: Agronomy and Horticulture

Domain: Food Value Addition

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| --- | --- | --- | --- |
| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: FVA 1 | Preserve fresh produce through drying and concentration at cottage industry level | 3 | 4 |

FIELD: Agriculture and Nature Conservation

Subfield: Infrastructure

Domain: Water supplies

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| --- | --- | --- | --- |
| **Unit No.** | **Unit Standard Title** | **Level** | **Credit** |
| Unit ID: FMI 7 | Demonstrate knowledge of rainwater harvesting, handling, and storage systems | 3 | 4 |

# Credit recognition and transfer arrangements

Credits for any version of a unit standard of the same identification number will be recognised in the award of this qualification.

# Special arrangements

4.1 Providers seeking registration and/or accreditation to deliver this qualification must meet the following special arrangements.

4.1.1 This qualification will be offered to trainees **either** including a period of 6 months of **industrial/job attachment which is recommended to be split in 3 months attachment at a training centre to develop a Portfolio of Evidence (POE) and be mentored on site and 3 months in the industry for exposure**, ***or*** as an **apprenticeship scheme** of a duration determined and agreed upon by the employer and the training provider on a ratio of 70/30 (70% at workplace and 30% at training institution) basis.

**Industrial/job attachment** is defined as a period in a workplace setting where a trainee obtains structured practical experience in a specific occupation in order to complement competencies acquired during training at a technical vocational training provider (TVTP).

**Apprenticeship** refers to the system of work integrated learning, where an apprentice is employed by a company on contractual basis, earning a monthly salary, learning and working side-by-side with an experienced mentor. In this case the employer must be an NTA approved entity (company) to register apprentices and has to identify a suitable training provider to provider to provide the apprentice with the opportunity to gain skills and knowledge from theoretical training.

Employers and training providers are encouraged to consult the **National Policy On Work-Integrated Learning (WIL) for Technical and Vocational Education and Training (TVET) Sector** for further details on WIL implementation.

4.1.2 Providers involved in the assessment of this qualification and the associated unit standards must comply with the national assessment framework for the TVET system up to and including level 5 of the National Qualifications Framework. Assessment will include performance and achievement assessment acquired through work integrated learning periods.

Assessment arrangements apply to all occupations and industries which are encompassed in the technical vocational education and training sector.

Assessment for this Qualification can be based on Portfolio of evidence in conjunction with at least one final field outcome-based product evaluation.

4.1.3 Providers of this qualification and the associated unit standards must be registered and/or accredited.

4.1.4 Providers of this qualification and their associated unit standards must have access to all equipment and facilities detailed in the tools and equipment list of the relevant training program.

4.2 Competencies covered in this qualification may be assessed through Recognition of Prior Learning (RPL).

4.3 Further relevant information and documentation may be accessed through:

**Namibia Training Authority**

10 Rand Street

Khomasdal

Namibia

Telephone number: 061 207 8550

Facsimile number: 061 207 8551

# Transition arrangements

Non National Qualifications Framework transition

None

National Qualifications Framework transition

This is the first version of this qualification.