



education

Department:
Education
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATES (VOCATIONAL)

ASSESSMENT GUIDELINES

ANIMAL PRODUCTION

NQF Level 3

September 2007

ANIMAL PRODUCTION– LEVEL 3

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SECTION A: PURPOSE OF THE SUBJECT ASSESSMENT GUIDELINES

This document provides the lecturer with guidelines to develop and implement a coherent, integrated assessment system for Animal Production in the National Certificates (Vocational). It must be read with the *National Policy Regarding Further Education and Training Programmes: Approval of the Documents, Policy for the National Certificates (Vocational) Qualifications at Levels 2 to 4 on the National Qualifications Framework (NQF)*. This assessment guideline will be used for National Qualifications Framework Levels 2-4.

This document explains the requirements for the internal and external subject assessment. The lecturer must use this document with the *Subject Guidelines: Animal Production* to prepare for and deliver Animal Production. Lecturers should use a variety of resources and apply a Range of assessment skills in the setting, marking and recording of assessment tasks.

SECTION B: ASSESSMENT IN THE NATIONAL CERTIFICATES (VOCATIONAL)

1 ASSESSMENT IN THE NATIONAL CERTIFICATES (VOCATIONAL)

Assessment in the National Certificates (Vocational) is underpinned by the objectives of the National Qualifications Framework (NQF). These objectives are to:

- Create an integrated national framework for learning achievements.
- Facilitate access to and progression within education, training and career paths.
- Enhance the quality of education and training.
- Redress unfair discrimination and past imbalances and thereby accelerate employment opportunities.
- Contribute to the holistic development of the student by addressing:
 - social adjustment and responsibility;
 - moral accountability and ethical work orientation;
 - economic participation; and
 - nation-building.

The principles that drive these objectives are:

- **Integration**

To adopt a unified approach to education and training that will strengthen the human resources development capacity of the nation.

- **Relevance**

To be dynamic and responsive to national development needs.

- **Credibility**

To demonstrate national and international value and recognition of qualification and acquired competencies and skills.

- **Coherence**

To work within a consistent framework of principles and certification.

- **Flexibility**

To allow for creativity and resourcefulness when achieving Learning Outcomes, to cater for different learning styles and use a Range of assessment methods, instruments and techniques.

- **Participation**

To enable stakeholders to participate in setting standards and co-ordinating the achievement of the qualification.

- **Access**

To address barriers to learning at each level to facilitate students' progress.

- **Progression**

To ensure that the qualification framework permits individuals to move through the levels of the national qualification via different, appropriate combinations of the components of the delivery system.

- **Portability**

To enable students to transfer credits of qualifications from one learning institution and/or employer to another institution or employer.

- **Articulation**

To allow for vertical and horizontal mobility in the education system when accredited pre-requisites have been successfully completed.

- **Recognition of Prior Learning**

To grant credits for a unit of learning following an assessment or if a student possesses the capabilities specified in the outcomes statement.

- **Validity of assessments**

To ensure assessment covers a broad Range of knowledge, skills, values and attitudes (SKVAs) needed to demonstrate applied competency. This is achieved through:

- clearly stating the outcome to be assessed;
- selecting the appropriate or suitable evidence;
- matching the evidence with a compatible or appropriate method of assessment; and
- selecting and constructing an instrument(s) of assessment.

- **Reliability**

To assure assessment practices are consistent so that the same result or judgment is arrived at if the assessment is replicated in the same context. This demands consistency in the interpretation of evidence; therefore, careful monitoring of assessment is vital.

- **Fairness and transparency**

To verify that no assessment process or method(s) hinders or unfairly advantages any student. The following could constitute unfairness in assessment:

- Inequality of opportunities, resources or teaching and learning approaches
- Bias based on ethnicity, race, gender, age, disability or social class
- Lack of clarity regarding Learning Outcome being assessed
- Comparison of students' work with other students, based on learning styles and language

- **Practicability and cost-effectiveness**

To integrate assessment practices within an outcomes-based education and training system and strive for cost and time-effective assessment.

2 ASSESSMENT FRAMEWORK FOR VOCATIONAL QUALIFICATIONS

The assessment structure for the National Certificates (Vocational) qualification is as follows:

2.1 Internal continuous assessment (ICASS)

Knowledge, skills values, and attitudes (SKVAs) are assessed throughout the year using assessment instruments such as projects, tests, assignments, investigations, role-play and case studies. The internal continuous assessment (ICASS) practical component is undertaken in a real workplace, a workshop or a "Structured Environment". This component is moderated internally and externally quality assured by Umalusi. All internal continuous assessment (ICASS) evidence is kept in a Portfolio of Evidence (PoE) and must be readily available for monitoring, moderation and verification purposes.

2.2 External summative assessment (ESASS)

The external summative assessment is either a single or a set of written papers set to the requirements of the Subject Learning Outcomes. The Department of Education administers the theoretical component according to relevant assessment policies.

A compulsory component of external summative assessment (ESASS) is the **integrated summative assessment task (ISAT)**. This assessment task draws on the students' cumulative learning throughout the year. The task requires **integrated application of competence** and is executed under strict assessment conditions. The task should take place in a simulated or "Structured Environment". The integrated summative assessment task (ISAT) is the most significant test of students' ability to apply their acquired knowledge.

The integrated assessment approach allows students to be assessed in more than one subject with the same integrated summative assessment task (ISAT).

External summative assessments will be conducted annually between October and December, with provision made for supplementary sittings.

3 MODERATION OF ASSESSMENT

3.1 Internal moderation

Assessment must be moderated according to the internal moderation policy of the Further Education and Training (FET) college. Internal college moderation is a continuous process. The moderator's involvement starts with the planning of assessment methods and instruments and follows with continuous collaboration with and support to the assessors. Internal moderation creates common understanding of Assessment Standards and maintains these across vocational programmes.

3.2 External moderation

External moderation is conducted by the Department of Education, Umalusi and, where relevant, an Education and Training Quality Assurance (ETQA) body according to South African Qualifications Authority (SAQA) and Umalusi standards and requirements.

The external moderator:

- monitors and evaluates the standard of all summative assessments;
- maintains standards by exercising appropriate influence and control over assessors;
- ensures proper procedures are followed;
- ensures summative integrated assessments are correctly administered;
- observes a minimum sample of ten (10) to twenty-five (25) percent of summative assessments;
- gives written feedback to the relevant quality assessor; and
- moderates in case of a dispute between an assessor and a student.

Policy on inclusive education requires that assessment procedures for students who experience barriers to learning be customised and supported to enable these students to achieve their maximum potential.

4 PERIOD OF VALIDITY OF INTERNAL CONTINUOUS ASSESSMENT (ICASS)

The period of validity of the internal continuous assessment mark is determined by the *National Policy on the Conduct, Administration and Management of the Assessment of the National Certificates (Vocational)*.

The internal continuous assessment (ICASS) must be re-submitted with each examination enrolment for which it constitutes a component.

5 ASSESSOR REQUIREMENTS

Assessors must be subject specialists and should ideally be declared competent against the standards set by the ETDP SETA. If the lecturer conducting the assessments has not been declared a competent assessor, an assessor who has been declared competent may be appointed to oversee the assessment process to ensure the quality and integrity of assessments.

6 TYPES OF ASSESSMENT

Assessment benefits the student and the lecturer. It informs students about their progress and helps lecturers make informed decisions at different stages of the learning process. Depending on the intended purpose, different types of assessment can be used.

6.1 Baseline assessment

At the beginning of a level or learning experience, baseline assessment establishes the knowledge, skills, values and attitudes (SKVAs) that students bring to the classroom. This knowledge assists lecturers to plan learning programmes and learning activities.

6.2 Diagnostic assessment

This assessment diagnoses the nature and causes of learning barriers experienced by specific students. It is followed by guidance, appropriate support and intervention strategies. This type of assessment is useful to make referrals for students requiring specialist help.

6.3 Formative assessment

This assessment monitors and supports teaching and learning. It determines student strengths and weaknesses and provides feedback on progress. It determines if a student is ready for summative assessment.

6.4 Summative assessment

This type of assessment gives an overall picture of student progress at a given time. It determines whether the student is sufficiently competent to progress to the next level.

7 PLANNING ASSESSMENT

An assessment plan should cover three main processes:

7.1 Collecting evidence

The assessment plan indicates which Subject Outcomes and Assessment Standards will be assessed, what assessment method or activity will be used and when this assessment will be conducted.

7.2 Recording

Recording refers to the assessment instruments or tools with which the assessment will be captured or recorded. Therefore, appropriate assessment instruments must be developed or adapted.

7.3 Reporting

All the evidence is put together in a report to deliver a decision for the subject.

8 METHODS OF ASSESSMENT

Methods of assessment refer to who carries out the assessment and includes lecturer assessment, self-assessment, peer assessment and group assessment.

LECTURER ASSESSMENT	The lecturer assesses students' performance against given criteria in different contexts, such as individual work, group work, etc.
SELF-ASSESSMENT	Students assess their own performance against given criteria in different contexts, such as individual work, group work, etc.
PEER ASSESSMENT	Students assess another student's or group of students' performance against given criteria in different contexts, such as individual work, group work, etc.
GROUP ASSESSMENT	Students assess the individual performance of other students within a group or the overall performance of a group of students against given criteria.

9 INSTRUMENTS AND TOOLS FOR COLLECTING EVIDENCE

All evidence collected for assessment purposes is kept or recorded in the student's Portfolio of Evidence (PoE).

The following table summarises a variety of methods and instruments for collecting evidence. A method and instrument is chosen to give students ample opportunity to demonstrate the Subject Outcome has been attained. This will only be possible if the chosen methods and instruments are appropriate for the target group and the Specific Outcome being assessed.

	METHODS FOR COLLECTING EVIDENCE		
	Observation-based (Less structured)	Task-based (Structured)	Test-based (More structured)
Assessment instruments	<ul style="list-style-type: none"> • Observation • Class questions • Lecturer, student, parent discussions 	<ul style="list-style-type: none"> • Assignments or tasks • Projects • Investigations or research • Case studies • Practical exercises • Demonstrations • Role-play • Interviews 	<ul style="list-style-type: none"> • Examinations • Class tests • Practical examinations • Oral tests • Open-book tests
Assessment tools	<ul style="list-style-type: none"> • Observation sheets • Lecturer's notes • Comments 	<ul style="list-style-type: none"> • Checklists • Rating scales • Rubrics 	<ul style="list-style-type: none"> • Marks (e.g. %) • Rating scales (1-7)
Evidence	<ul style="list-style-type: none"> • Focus on individual students • Subjective evidence based on lecturer observations and impressions 	<p>Open middle: Students produce the same evidence but in different ways.</p> <p>Open end: Students use same process to achieve different results.</p>	Students answer the same questions in the same way, within the same time.

10 TOOLS FOR ASSESSING STUDENT PERFORMANCE

Rating scales are marking systems where a symbol (such as 1 to 7) or a mark (such as 5/10 or 50%) is defined in detail. The detail is as important as the coded score. Traditional marking, assessment and evaluation mostly used rating scales without details such as what was right or wrong, weak or strong, etc.

Task lists and **checklists** show the student what needs to be done. These consist of short statements describing the expected performance in a particular task. The statements on the checklist can be ticked off when the student has adequately achieved the criterion. Checklists and task lists are useful in peer or group assessment activities.

Rubrics are a hierarchy (graded levels) of criteria with benchmarks that describe the minimum level of acceptable performance or achievement for each criterion. Using rubrics is a different way of assessing and cannot be compared to tests. Each criterion described in the rubric must be assessed separately. Mainly, two types of rubrics, namely holistic and analytical, are used.

11 SELECTING AND/OR DESIGNING RECORDING AND REPORTING SYSTEMS

The selection or design of recording and reporting systems depends on the purpose of recording and reporting student achievement. **Why** particular information is recorded and **how** it is recorded determine which instrument will be used.

Computer-based systems, for example spreadsheets, are cost and time effective. The recording system should be user-friendly and information should be easily accessed and retrieved.

12 COMPETENCE DESCRIPTIONS

All assessment should award marks to evaluate specific assessment tasks. However, marks should be awarded against rubrics and not be simply a total of ticks for right answers. Rubrics should explain the competence level descriptors for the skills, knowledge, values and attitudes (SKVAs) that a student must demonstrate to achieve each level of the rating scale.

When lecturers or assessors prepare an assessment task or question, they must ensure that the task or question addresses an aspect of a Subject Outcome. The relevant Assessment Standard must be used to create the rubric to assess the task or question. The descriptions must clearly indicate the minimum level of attainment for each category on the rating scale.

13 STRATEGIES FOR COLLECTING EVIDENCE

A number of different assessment instruments may be used to collect and record evidence. Examples of instruments that can be (adapted and) used in the classroom include:

13.1 Record sheets

The lecturer observes students working in a group. These observations are recorded in a summary table at the end of each project. The lecturer can design a record sheet to observe students' interactive and problem-solving skills, attitudes towards group work and involvement in a group activity.

13.2 Checklists

Checklists should have clear categories to ensure that the objectives are effectively met. The categories should describe how the activities are evaluated and against what criteria they are evaluated. Space for comments is essential.

SECTION C: ASSESSMENT IN ANIMAL PRODUCTION

1 SCHEDULE OF ASSESSMENT

At NQF levels 2, 3 and 4, lecturers will conduct assessments as well as develop a schedule of formal assessments that will be undertaken in the year. All three levels also have an external examination that accounts for 50 percent of the total mark. The marks allocated to assessment tasks completed during the year, kept or recorded in a Portfolio of Evidence (PoE) account for the other 50 percent.

The Portfolio of Evidence (PoE) and the external assessment include practical and written components. The practical assessment in Animal Production must, where necessary, be subjected to external moderation by Umalusi or an appropriate Education and Training Quality Assurance (ETQA) body, appointed by the Umalusi Council in terms of Section 28(2) of the *General and Further Education and Training Quality Assurance Act, 2001 (Act No. 58 of 2001)*.

2 RECORDING AND REPORTING

Animal Production, as is the case for all the other Vocational subjects, is assessed according to five levels of competence. The level descriptions are explained in the following table.

Scale of Achievement for the Vocational component

RATING CODE	RATING	MARKS %
5	Outstanding	80-100
4	Highly competent	70-79
3	Competent	50-69
2	Not yet competent	40-49
1	Not achieved	0-39

The programme of assessment should be recorded in the Lecturer's Portfolio of Assessment for each subject. The following at least should be included in the Lecturer's Assessment Portfolio:

- A contents page
- The formal schedule of assessment
- The requirements for each assessment task
- The tools used for each assessment task
- Recording instrument(s) for each assessment task
- A mark sheet and report for each assessment task

The college must standardise these documents.

The student's Portfolio of Evidence (PoE) must include at least:

- A contents page
- The assessment tasks according to the assessment schedule

- The assessment tools or instruments for the task
- A record of the marks (and comments) achieved for each task

Where a task cannot be contained as evidence in the Portfolio of Evidence (PoE), its exact location must be recorded and it must be readily available for moderation purposes.

**ASSESSMENT OF ANIMAL PRODUCTION
LEVEL 3**

3 INTERNAL ASSESSMENT OF SUBJECT OUTCOMES IN ANIMAL PRODUCTION - LEVEL 3

Topic 1: Animal anatomy and physiology 2

SUBJECT OUTCOME	
<p>1.1 Explain the structure and functioning of the following systems in farm animals: external systems and coverings, sensory systems, nervous system, urinary and genital systems, endocrine gland system, homeostatic control mechanisms</p>	
ASSESSMENT STANDARD	LEARNING OUTCOME
<ul style="list-style-type: none"> Explanation is given in simple terms 	<ul style="list-style-type: none"> Outline cellular respiration in simple terms. <i>Range: Both aerobic and anaerobic respiration, using overall equations. No biochemical details</i>
<p>Main organs are identified, and their functioning is explained, including how they respond to stress</p>	<ul style="list-style-type: none"> Identify the main organs involved in each system, in diagrams, photographs and carcasses. Explain how they work, in simple terms, including (where appropriate) how they could react in situations of stress. <p><i>Range:</i></p> <ul style="list-style-type: none"> External systems and coverings include the following: mammalian / avian skin, hairs including wool and fur, feathers; commercial use of fur, feathers and hides. Sensory systems will include eyes, ears, and sensors in the skin for heat, pain and pressure. Nervous system will include major parts of the brain, spinal cord, sensory and motor nerves in general. No details on specific nerves, or on the transmission of impulses and operation of synapses. Urinary system will include simple structure and functioning of kidneys and bladder. Genital systems will include (in female) ovaries, Fallopian tubes and uterus, fertilisation, implantation and parturition; (in male) testes, epididymis, vas deferens. Endocrine gland system will include pituitary, thyroid, islets of Langerhans, adrenal, testes and ovaries. Homeostatic control mechanisms will include those for temperature, and the concentrations of sugar and salts in the blood. Students will not be expected to operate a microscope themselves.
ASSESSMENT TASKS OR ACTIVITIES	
<ul style="list-style-type: none"> Theory Test Where possible, students should be able to point to structures in live animals or carcasses, explaining how each works. For microscopic size structures, diagrams and photomicrographs will be used. Students will be provided with diagrams and/or photomicrographs and can be asked to annotate them. Students will not be asked to draw from memory diagrams of microscopic structures. 	

Topic 2: Sheep production

SUBJECT OUTCOMES	
<p>2.1 Identify and describe the sheep types and breeds in terms of their suitability to environmental conditions <i>Range: Environmental conditions include climate, vegetation and diseases. Types will include sheep producing wool as well as others.</i></p>	
ASSESSMENT STANDARD	LEARNING OUTCOME
<ul style="list-style-type: none"> Different sheep breeds are identified and described in terms of their suitability. 	<ul style="list-style-type: none"> Identify the different breeds of sheep suitable for southern African conditions. Describe the characteristics of different types of sheep and breeds for purposes of production and breeding in different local environments.

ASSESSMENT TASKS OR ACTIVITIES
<ul style="list-style-type: none"> • Theory: case study on farming sheep in different environmental conditions with an expectation of certain production quality and quantity for economical purposes. • Knowledge test on breed types of sheep in terms of adaptability and production purposes. • Practical: students should be able to identify breeds of sheep, from pictures if the animals are not available, and say what the key identifying features are.

SUBJECT OUTCOMES
2.2 Describe and apply feeding methods and ingredients or rations of sheep in relation to their stages of growth and production.

ASSESSMENT STANDARD	LEARNING OUTCOME
<ul style="list-style-type: none"> • Feeding of sheep is described and applied in relation to their stages of growth and production 	<ul style="list-style-type: none"> • Identify and explain the different methods of feeding of sheep in relation to breed, production and growth stages. <i>Range: Method refers to (natural grazing/browsing, supplementary feeding)</i> • Explain the different nutritional requirements and rearing practices in relation to the different types of sheep. • Explain, using examples, different grazing systems in relation to adaptability and breed selection. • Apply the above in the workplace situation.

ASSESSMENT TASKS OR ACTIVITIES

<ul style="list-style-type: none"> • Theory: knowledge test, or assignment, on feed types and their advantages and disadvantages in terms of growth and production requirements. • Given a description of an imaginary breed of sheep, students should be able to explain what feeding procedures would be appropriate. • Practical: students are able to set up grazing systems for their flock of sheep, and give supplementary feeds as appropriate.
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SUBJECT OUTCOMES
2.3 Identify and describe grazing systems in a workplace environment.

ASSESSMENT STANDARD	LEARNING OUTCOME
<ul style="list-style-type: none"> • Grazing system is planned and implemented where possible. 	<ul style="list-style-type: none"> • Identify and explain the grazing habits of sheep, to enable the provision of suitable grazing. • Explain carrying capacities of camps so as to determine storage capacity. • Explain advantages and disadvantages of different grazing systems. • Explain advantages of rotational grazing. • Explain disadvantages of overgrazing and describe its consequences using examples • Explain the principles and importance of the demarcation of camps in relation to effective livestock farming. • Identify appropriate material for camp demarcation for effective farming practices. <i>RANGE: Refers to materials for fencing and drinking troughs</i>

ASSESSMENT TASKS OR ACTIVITIES

<ul style="list-style-type: none"> ▪ Assignment: Compare the grazing habits of sheep to those of other livestock .The preferred plants or vegetation and suggested grazing methods to be practised should be explained with supporting statements. ▪ Students should be able to do the tasks listed in the Learning Outcomes in theory tests and practical situations.
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SUBJECT OUTCOMES	
2.4 Select and classify grazing camps for use.	
ASSESSMENT STANDARD	LEARNING OUTCOME
<ul style="list-style-type: none"> Suitable systems of grazing camps for different environments are outlined. Students show they can demarcate them. 	<ul style="list-style-type: none"> Select the appropriate grazing camp in terms of the availability of nutrition, water and foliage for shade. Demarcate camps in order to apply rotational grazing.
ASSESSMENT TASKS OR ACTIVITIES	
Students should be able to do the tasks listed in the Learning Outcomes in theory tests and practical situations.	

SUBJECT OUTCOME	
2.5 Identify suitable areas for sheep production in terms of climatic conditions, vegetation and market availability.	
ASSESSMENT STANDARD	LEARNING OUTCOME
<ul style="list-style-type: none"> Suitable areas for sheep production are identified, with explanations. 	<ul style="list-style-type: none"> Identify, using examples, suitable climates for various breeds of sheep for good production. Identify and explain the grazing habits for sheep to enable the provision of suitable grazing Identify and describe markets for sheep in order to make sound economic decisions. <i>RANGE: Market refers to wool, meat and skin.</i>
ASSESSMENT TASKS OR ACTIVITIES	
<ul style="list-style-type: none"> Theory tests Assignments including simple market survey (can do jointly with Agribusiness). 	

SUBJECT OUTCOME	
2.6 Identify and control diseases and parasites affecting sheep according to workplace procedures.	
ASSESSMENT STANDARD	LEARNING OUTCOME
<ul style="list-style-type: none"> Diseases and parasites affecting sheep are identified and controlled according to workplace procedures. 	<ul style="list-style-type: none"> Identify diseases and parasites that affect quality sheep production which are common in the area. <i>RANGE: Diseases refers to bacterial, protozoan and viral diseases. Parasites will include external and internal parasites.</i> Outline the life cycles of the disease and parasite organisms, with particular reference to measures for prevention and control. Identify the treatments used for different diseases and parasites so as to apply the appropriate intervention. Explain the workplace procedures used to minimise infection, and for treatment of infected sheep Apply the above in the workplace environment
ASSESSMENT TASKS OR ACTIVITIES	
<ul style="list-style-type: none"> Theory: Knowledge test on diseases and parasites affecting sheep in your area. Given the life cycle of an imaginary disease or parasite, students should be able to suggest preventive measures. Practical: students should be able to do the tasks set out in the Learning Outcomes. Visit sheep on farm OR simulation of one, and check for infected and afflicted animals. Write a report to the farmer on diseases identified during the visit, how they can be treated and what prevention measures should be taken in future. (This scenario can also be created in a form of a case study.) 	

SUBJECT OUTCOME	
2.7 Demonstrate an ability to handle sheep under different circumstances.	
ASSESSMENT STANDARD	LEARNING OUTCOME
<ul style="list-style-type: none"> Ability to handle sheep is demonstrated 	<ul style="list-style-type: none"> Explain different ways of handling sheep in different circumstances. <i>RANGE: Different circumstances refer to growth stages, treatment, transportation, breeding, castration, tail docking, hoof clipping and shearing.</i> Apply appropriate ways of handling sheep at all stages of rearing and production(includes transportation, castrating, tail docking, hoof clipping, shearing, and treating) <i>RANGE: This includes growth stages, treatment, transportation, breeding, castration; tail docking, hoof clipping and shearing.</i>
ASSESSMENT TASKS OR ACTIVITIES	
<ul style="list-style-type: none"> Practical: students should be able to do the tasks set out in the learning outcomes. Students should be able to explain why some incorrect practices are likely to damage the animals 	

SUBJECT OUTCOME	
2.8 Explain breeding and selection in sheep.	
ASSESSMENT STANDARD	LEARNING OUTCOME
<ul style="list-style-type: none"> Basic approaches to breeding and selection are explained. 	<ul style="list-style-type: none"> Identify the characteristics of a ram and ewe that are suitable for breeding purposes. Identify and explain breeding methods to improve production. <i>RANGE: Methods refer to upgrading, cross breeding and in-line breeding. Mendelian or other genetics is NOT required.</i> Identify and explain the advantages and disadvantages of the breeding methods
ASSESSMENT TASKS OR ACTIVITIES	
<ul style="list-style-type: none"> Practical and theory: identify suitable characteristics. Theory: explain suitable methods, in tests and/or assignments. 	

Topic 3: Pig production

SUBJECT OUTCOME	
3.1 Explain the main pig breeds, their characteristics and housing requirements in order to produce quality products.	
ASSESSMENT STANDARD	LEARNING OUTCOME
<ul style="list-style-type: none"> Different breeds, their characteristics and housing types are identified and selected in terms of adaptability 	<ul style="list-style-type: none"> Identify the different breeds of pigs and their characteristics to enable appropriate selection for particular circumstances. <i>RANGE: circumstances include physical environment, availability of feedstuffs, and market</i> Identify the correct housing for each of the breeds in terms of the growth stages and production.
ASSESSMENT TASKS OR ACTIVITIES	
<ul style="list-style-type: none"> Theory: Case study on farming pigs in different environmental conditions with an expectation of certain production quality and quantity for economical purposes. Knowledge test on breed types of pig in terms of adaptability and production purposes. Practical: students should be able to identify breeds, from pictures if the animals are not available, and say what the key identifying features are. Theory and practical: students should be able to explain the advantages and disadvantages of different types of housing. 	

SUBJECT OUTCOME	
3.2. Explain, with examples, the methods of feeding pigs	
ASSESSMENT STANDARD	LEARNING OUTCOME
<ul style="list-style-type: none"> Types of feeds (components and value) and feeding methods are explained. 	<ul style="list-style-type: none"> Identify the methods of feeding pigs and explain their advantages and disadvantages. <i>Range: Methods refers to intensive, semi-intensive and extensive.</i> Identify the correct type of feed for each growth stage to enable proper nutrition. <i>Range: Growth stages refer to piglets, weaners, boar and sow.</i> Compare types of feed in terms of their nutritional components and value. <i>Range: Feed refers to Pig meal pellets, pig meal mash and swill feed. Nutritional components limited to those covered in Animal anatomy and physiology 1 in NQF level 2.</i> Make correct nutritional decisions for a herd of pigs in conditions similar to those at the college.
ASSESSMENT TASKS OR ACTIVITIES	
Theory: students can do the activities listed in the Learning Outcomes.	

SUBJECT OUTCOME	
3.3 Explain and perform selection and breeding principles in pig production, for production and reproduction purposes.	
ASSESSMENT STANDARD	LEARNING OUTCOME
<ul style="list-style-type: none"> Selection and breeding procedures are explained and, where possible, used. 	<ul style="list-style-type: none"> Identify and explain the characteristics of sow and boar in terms of production and reproduction, and explain and apply selection criteria in order to make sound economic decisions. Describe and (where possible) apply breeding methods <i>RANGE upgrading, cross breeding and in-line breeding</i> Explain the advantages and disadvantages of the breeding methods

ASSESSMENT TASKS OR ACTIVITIES
<ul style="list-style-type: none"> • Students can demonstrate the characteristics in practical situations as well as explain in theory (which will include characteristics not easy to observe directly in the field). • Students can do the activities listed in the Learning Outcomes.

SUBJECT OUTCOME	
3.4 Identify and control diseases and parasites affecting pigs according to workplace procedures	
ASSESSMENT STANDARD	LEARNING OUTCOME
<ul style="list-style-type: none"> • Diseases and parasites affecting pigs are identified and controlled according to workplace procedures. 	<ul style="list-style-type: none"> • Identify and describe how climatic conditions impact on the types of diseases and parasites that infect and affect pigs. <i>Range: Climactic conditions refer to cold, wet, snow, frost and humidity.</i> • Identify and explain diseases and parasites that commonly infect and affect pigs. <i>Range: Diseases refer to bacterial, protozoan and viral.</i> • Identify and apply the treatment used for different diseases and parasites. <i>Range: Treatment refers to parasite injections, dosing, dipping.</i> • Explain and apply the workplace procedures used for treatment of afflicted and infected pigs. <i>Range: Workplace procedures refer to handling principles and facilities, vaccination programme and health monitoring (veterinarian inspections)</i>
ASSESSMENT TASKS OR ACTIVITIES	
Students explain in theory and do in practice the activities listed in the learning outcomes.	

4 SPECIFICATIONS FOR EXTERNAL ASSESSMENT IN ANIMAL PRODUCTION - LEVEL 3

4.1 Integrated Summative Assessment Task (ISAT)

A compulsory component of ESASS is the **Integrated Summative Assessment Task (ISAT)**, which is a major assessment task that draws on the learners' cumulative learning achieved during the year. The task requires **integrated application of competence** and is executed and recorded in compliance with assessment conditions.

The ISAT may be applied as follows:

- The students could be assigned tasks at the beginning of the year which they will have to complete in various phases during the year to obtain part assessment. The final assessment is made at the end of the year upon completion of the task (Project).

The ISAT will be set by the externally appointed examiner and be conveyed to colleges within the first quarter of each year.

The integrated assessment approach allows for the learner to be assessed in more than one subject within the same ISAT.

4.2 National examination

A national examination is conducted annually in October or November by means of a paper set externally and marked and moderated externally. The following distribution of cognitive application is suggested:

LEVEL 3	KNOWLEDGE AND COMPREHENSION	APPLICATION	ANALYSIS, SYNTHESIS AND EVALUATION
	40%	40%	20%