****

**THE REPUBLIC OF KENYA**

**COMPETENCY BASED CURRICULUM**

**FOR**

**POULTRY PRODUCT PROCESSING**

**LEVEL 5**



TVET CDACC

P.O. BOX 15745-00100

NAIROBI

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# FOREWORD

Agriculture plays an important role in Kenya’s economy. This importance is reflected in the positive correlation between growth in the agricultural sector and that of the national economy. Kenya’s economy registered a growth of 3.3% between 2013 and 2014 with agriculture sector being the leading sector contributing 27.3% to the Gross Domestic Product (GDP) in 2014.In this regard, crops, animal production, fishing and aquaculture contributed 19.7%, 4.9% and 0.8% of the GDP respectively totalling 25.4%, while the balance of 1.9% came from forestry and other support activities. Like most countries in Africa, majority (61%) of Kenya’s population rely on agriculture for employment despite the challenges of climate change, soil degradation and increasing population pressure. In order to enhance the productivity of the work force and ensure a productive and innovative agricultural sector, as well as food security, meaningful education and training of all people involved is of utmost importance.

In the past Agricultural Technical and Vocational Education and Training (ATVET) did not always receive adequate attention from policy-makers. The current education system emphasizes on acquiring knowledge rather than skills development. This resulted to most farmers and the stakeholders in agriculture lacking the requisite skills. Current reforms in the education system aim at addressing this challenge by reforming the agriculture training curriculum, its delivery and assessment. These reforms can only be achieved through Competency Based Education and Training (CBET) approach. The reforms demand for a competency-based curriculum which is a tool that will aid in the development of skills, knowledge and attitudes of the farmers. Such training will improve crop and animal husbandry skills which will in turn contribute to increased productivity and improvement of agriculture in the country. Ideally, this education and training will not only include farmers, but all professions involved in agriculture.

This curriculum for the poultry subsector presents us with a unique approach to training which will allow the trainees to gain skills required in their occupation/jobs. It will also allow them to train on their areas of interest without necessarily undertaking all the modules in the curriculum; this permits flexibility in training with multiple entries and exits. It is therefore the curriculum that will revolutionize the agriculture sector in Kenya.

**Principal Secretary,
State Department of Livestock,**

**Ministry of Agriculture, Livestock and Fisheries.**

**PREFACE**

Poultry farming has been on the increase in the last ten years due to high population density, diminishing land sizes, and the escalating un-employment levels in formal sector. Poultry farming contributes to the lives of 21 million Kenyans and 6.1% of agricultural GDP. There are approximately 32 million birds in Kenya out of which 76% are free ranging indigenous chicken, 8% are broilers and 14% commercial layers. The indigenous poultry production involves 75% of rural households. As of 2011, it was reported that approximately 71% of eggs and poultry meat in Kenya are derived from indigenous poultry. In 2006, it was reported that commercial poultry production constitutes 23.8% of the total poultry population, with broilers representing 16.2% and layers another 7.8%. Other poultry species such as ducks, guinea fowls, Quails and turkeys comprise about 2.2% of the total poultry population. The industry is therefore supposed to play a strategic role in the ongoing socio-economic pillar under the vision 2030.

However, the industry has seen slow growth over the past years due to lack of skills and increasing costs of production. This is despite the fact that the sub-sector contributes positively to wealth creation, poverty alleviation, and gender equity especially in the rural areas. The industry contributes to the macro economy by generating incomes for the value chain actors, creation of employment opportunities for rural people and provision of source of protein for poor families and manure for their gardens.

To address the challenge of lack of skilled labour, a Competency Based curriculum development process was initiated. Using the DACUM methodology Job Analysis Chart and Occupation standards were developed in collaboration with the industry players and guided by TVET Curriculum Development Assessment and Certification Council (CDACC). Eleven Jobs/Occupations were identified,

Job Analysis Charts were further analysed through Task Analysis and the information generated used to develop Occupation Standards. The information generated from the task analysis was also used to develop the Units of competences for each job. The result was to the realization of 11 curricula for the poultry subsector. This was done by experts drawn from technical training institutions, Universities and industry representatives.

The curricula were presented to the Poultry Sector Skills Advisory Committee (PSSAC) who made recommendations for improvement of the curricula and adopted the curricula for its progression to the next stages of approval by the CDACC. The curricula development process was a rigorous exercise that involved wide consultations with various stakeholders with the aim of enriching it and promoting its acceptance. The end product is a rich and well thought tool that will be used to deliver Competence Based Training and produce competent graduates that can employed, entrepreneurs or self-employed in the poultry industry.

**CHAIRPERSON, TVET CDACC.**

# ACKNOWLEDGEMENTS

This Curriculum was developed through the combined efforts of different stakeholders in the poultry subsector namely the state department of livestock, private practitioners and regulators. Institutions in the State Departments of Livestock led the process of this curriculum development and key among them were the Dairy Training Institute (DTI), and, Animal Health and Industry Training Institutes (AHITIs). We wish to acknowledge the invaluable contribution received from the private sector industry players who provided inputs towards the development of occupational standards against which this curriculum was developed.

With the Occupational Standards in hand, the stakeholders provided technical inputs towards the development and completion of this curriculum. They sat through many hours putting together all the knowledge, skills and attitudes that a Poultry industry worker would require in effectively performing his / her duties and tasks as per the Occupational Standards developed.

We are most sincerely thankful to the heads of these institutions who released their staff to join in this important course. Our gratitude goes to the various facilitators that moderated several workshops and ensured that all deliberations and outputs were captured and compiled. These persons did not only demonstrate patience, but also provided leadership by motivating and guiding the groups towards the finalization of this curriculum. We cannot forget to thank the government agencies that regulate the Technical and Vocational Education and Training (TVET) system namely TVET Authority and TVET CDACC through whom guidance and support was provided on this curriculum development.

We are greatly indebted to the Food Security and Drought Resilience Programme (FSDRP) with support of the German Development Cooperation (GIZ), which enabled the implementation of this curriculum development process through the Food Security Project (FSP). In the same breath, we are indebted to the National Coordinator of the GIZ Comprehensive Africa Agricultural Development Programme (CAADP) ATVET project who was instrumental in enabling the smooth and close cooperation between the project and the key government ministries namely Ministry of Agriculture, Livestock, Fisheries and Irrigation (MoALF&I) and Ministry of Education (MoE).

Last but not least, we are grateful to any other person, institution, organization or company who played any role in making this process successful but has not been mentioned. We dearly acknowledge your contribution and support

**COUNCIL SECRETARY/CEO,**

**TVET CDACC.**

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# ABBREVIATIONS AND ACRONYMS

|  |  |
| --- | --- |
| 2D | 2 Dimensional |
| 3D | 3 Dimensional |
| AHITI | Animal Health and Industry Training Institute |
| ATVET | Agricultural Technical and Vocational Education and Training |
| CAADP | Comprehensive Africa Agricultural Development Programme |
| CAD | Computer Assisted Drawing |
| CBET | Competency Based Education and Training |
| CDACC  | Curriculum Development Assessment and Certification Council |
| CEO | Chief Executive Officer |
| DACUM | Develop a Curriculum |
| DTI | Dairy Training Institute |
| DVS | Director of Veterinary Services |
| EMCA | Environmental Management and Conservation Act |
| EMS | Environmental Management Systems |
| FSDRP | Food Security and Drought Resilience Programme |
| FSP | Food Security Project |
| GDP | Gross Domestic Product |
| GMP | Good Manufacturing Practices |
| HACCP | Hazard Analysis Critical Control Point |
| ICT | Information Communication Technology  |
| KCSE | Kenya Certificate of Secondary Education |
| KNQA  | Kenya National Qualifications Authority |
| KNQF | Kenya National Qualifications Framework |
| LCD | Liquid Crystal Display |
| MAP | Modified Atmosphere Packaging |
| MoALF&I | Ministry of Agriculture, Livestock, Fisheries and Irrigation |
| MoE | Ministry of Education  |
| NCA | National Construction Authority |
| NEMA | National Environmental Management Authority |
| NEPAD | New Partnerships for African Development |
| NGO | Non-Governmental Organization |
| NPCA | NEPAD Planning and Coordinating Agency |
| OS | Occupational Standard |
| OSH | Occupational Safety and Health |
| PPE | Personal Protective Equipment |
| PSSAC | Poultry Sector Skills Advisory Committee |
| TVET | Technical and Vocational Education and Training |
| TVETA | Technical and Vocational Education and Training Authority |

#  **KEY TO UNIT CODE**

 **AGR /CU/ PR /BC /01/5/ A**

Industry or sector

Curriculum

Occupational area

Type of competency

Competency number

Competency level

Version control

# COURSE OVERVIEW

Poultry processing level 5 qualification consists of competencies that a person must achieve to enable him/her to construct poultry processing plant, perform pre-slaughter handling, perform poultry slaughter, grade poultry meat, produce poultry-based products, manage poultry meat safety, manage poultry by products and perform administrative duties

This course consists of basic, common and core units of learning as indicated below:

**Basic Units of Learning**

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit Code** | **Unit Title** | **Duration in Hours** | **Credit factor**  |
| AGR/CU/PR/BC/01/5/A | Communication Skills | 25 | 2.5 |
| AGR CU/PR/BC/02/5/A | Numeracy Skills | 40 | 4 |
| AGR/CU/PR/BC/03/5/A | Digital Literacy | 45 | 4.5 |
| AGR/CU/PR/BC/04/5/A | Entrepreneurial Skills | 70 | 7 |
| AGR/CU/PR/BC/05/5/A | Employability Skills | 50 | 5 |
| AGR/CU/PR/BC/06/5/A | Environmental Literacy | 25 | 2.5 |
| AGR/CU/PR/BC/07/5/A | Occupational Safety and Health Practices | 25 | 2.5 |
| **Subtotal 1** | **280** | **28.0** |

**Common Units of Learning**

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit Code** | **Unit Title** | **Duration in Hours** | **Credit factor**  |
| AGR/CU/PR/BC/08/5/A | Technical Drawing | 30 | 3.0 |
| **Subtotal 2** | **30** | **3.0** |

**Core** **Units of Learning**

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit Code** | **Unit Title** | **Duration in Hours** | **Credit Factors** |
| AGR/CU/PR/CR/01/5/A | Poultry Processing Plant Construction | 70 | 7.0 |
| AGR/CU/PR/CR/02/5/A | Pre-Slaughter Handling | 60 | 6.0 |
| AGR/CU/PR/CR/03/5/A | Poultry Slaughter Operations  | 70 | 7.0 |
| AGR/CU/PR/CR/04/5/A | Poultry Meat Grading | 60 | 6.0 |
| AGR/CU/PR/CR/05/5/A | Poultry-Meat Based Production | 80 | 8.0 |
| AGR/CU/PR/CR/06/5/A | Poultry Meat Safety Management | 70 | 7.0 |
| AGR/CU/PR/CR/07/5/A | Poultry by Products Management | 70 | 7.0 |
| AGR/CU/PR/CR/08/5/A | Administrative Duties Performance | 60 | 6.0 |
| AGR/CU/PR/CR/09/5/A | Industrial Attachment | 360 | 36.0 |
| **Subtotal 3** | **900** | **90.0** |
| **Grand Total**  | **1210** | **121.0** |

The core units of learning are independent of each other and may be taken independently.

The total duration of the course is 1210 hours: 900 hours plus 360 hours of field attachment.

**Field Attachment**

It is envisaged that the trainee will have undergone a field training and assessment with a recognized poultry processing firm as a prerequisite for completion of this training course. At least 3600 hours (12 weeks) will be spent on a supervised and assessed field attachment.

**Entry Requirements**

An individual entering this course should have any of the following minimum requirements:

1. Poultry Products Processing Operations; Artisan Certificate Level 4

**Or**

1. Attained KCSE with at least D (plain)

**Or**

1. Equivalent qualifications as determined by Kenya National Qualifications Framework (KNQF)

**Assessment**

The course will be assessed at two levels: internally and externally. Internal assessment is continuous and is conducted by the trainer who is monitored by an accredited internal verifier while external assessment is conducted by accredited external assessors appointed by TVET CDACC.

**Certification**

A candidate will be issued with a certificate of competency on demonstration of competence in a unit of competency. To attain Poultry Processing Operator Level 5 qualification the candidate must demonstrate competence in all the units of competency as given in qualification pack. These certificates will be issued by TVET CDACC in conjunction with training provider.

# BASIC UNITS OF LEARNING

# COMMUNICATION SKILLS

**UNIT CODE: AGR**/CU/PR/BC/01/5/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Demonstrate Communication Skills

**Duration of Unit:** 25hours

**Unit Description**

This unit covers the competencies required to demonstrate communication skills. It involves meeting communication needs of clients and colleagues, contributing to the development of communication strategies, conducting workplace interviews, facilitating group discussions and representing the organisation.

**Summary of Learning Outcomes**

1. Meet communication needs of clients and colleagues
2. Contribute to the development of communication strategies
3. Conduct interviews
4. Facilitate group discussions
5. Represent the organization

**Learning Outcomes, Content and Suggested Assessment Methods**

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Meet communication needs of clients and colleagues
 | * Communication process
* Modes of communication
* Medium of communication
* Effective communication
* Barriers to communication
* Flow of communication
* Sources of information
* Organizational policies
* Organization requirements for written and electronic communication methods
* Report writing
* Effective questioning techniques (clarifying and probing)
* Workplace etiquette
* Ethical work practices in handling communication
* Active listening
* Feedback
* Interpretation
* Flexibility in communication
 | * Interview
* Third party reports
* Written texts
 |
| 1. Contribute to the development of communication strategies
 | * Dynamics of groups
* Styles of group leadership
* Openness and flexibility in communication
* Communication skills relevant to client groups
 | * Written
* Observation
 |
| 1. Conduct interviews
 | * Types of interview
* Establishing rapport
* Facilitating resolution of issues
* Developing action plans
 | * Written
* Observation
 |
| 1. Facilitate group discussions
 | * Identification of communication needs
* Dynamics of groups
* Styles of group leadership
* Presentation of information
* Encouraging group members participation
* Evaluating group communication strategies
 | * Written
* Observation
 |
| 1. Represent the organization
 | * Presentation techniques
* Development of a presentation
* Multi-media utilization in presentation
* Communication skills relevant to client groups
 | * Observation
* Written
 |

**Suggested Methods of Instruction**

* Role playing
* Viewing of related videos

**Recommended Resources**

* Desktop computers/laptops
* Internet connection
* Projectors
* Telephone

# NUMERACY SKILLS

**UNIT CODE:** AGR/CU/PR/BC/02/5/A

**Relationship to Occupational Standards:**

This unit addresses the Unit of Competency: Demonstrate Numeracy Skills

**Duration of Unit:** 40 hours

**Unit Description**

This unit covers the competencies required to demonstrate numeracy skills. It involves calculating with whole numbers and familiar fractions, decimals, and percentages for work estimating, measuring, and calculating with routine metric measurements for work, using routine maps and plans for work, interpreting, drawing and constructing 2D and 3D shapes for work, interpreting routine tables, graphs and charts for work, collecting data and constructing routine tables and graphs for work and using basic functions of calculator

**Summary of Learning Outcomes**

1. Calculate with whole numbers and familiar fractions, decimals and percentages for work
2. Estimate, measure and calculate with routine metric measurements for work
3. Use routine maps and plans for work
4. Interpret, draw and construct 2D and 3D shapes for work
5. Interpret routine tables, graphs and charts for work
6. Collect data and construct routine tables and graphs for work
7. Use basic functions of calculator

**Learning Outcomes, Content and Suggested Assessment Methods**

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Calculate with whole numbers and familiar fractions, decimals and percentages for work
 | * Interpretation of whole numbers, fractions, decimals, percentages and rates
* Calculations involving several steps
* Calculation with whole numbers and routine or familiar fractions, decimals and percentages
* Conversion between equivalent forms of fractions, decimals and percentages
* Application of order of operations to solve multi-step calculations
* Application of problem solving strategies
* Making estimations to check reasonableness of problem solving process, outcome and its appropriateness to the context and task
* Use of formal and informal mathematical language and symbolism to communicate the result of a task
 | * Written
* Practical test
* Observation
 |
| 1. Estimate, measure and calculate with routine metric measurements for work
 | * Selection and interpretation of measurement information in workplace tasks and texts
* Identification and selection of routine measuring equipment
* Estimation and making measurements using correct units
* Estimation and calculation using routine measurements
* Performing conversions between routinely used metric units
* Using problem solving processes to undertake tasks
* Recording information using mathematical language and symbols
 | * Written
* Practical test
* Observation
 |
| 1. Use routine maps and plans for work
 | * Identification of features in routine maps and plans
* Symbols and keys used in routine maps and plans
* Identification and interpretation of orientation of map to North
* Demonstrate understanding of direction and location
* Apply simple scale to estimate length of objects, or distance to location or object
* Give and receive directions using both formal and informal language
 | * Written
* Practical test
* Observation
 |
| 1. Interpret, draw and construct 2D and 3D shapes for work
 | * Identify two dimensional shapes and routine three-dimensional shapes in everyday objects and in different orientations
* Explain the use and application of shapes
* Use formal and informal mathematical language and symbols to describe and compare the features of two-dimensional shapes and routine three-dimensional shapes
* Identify common angles
* Estimate common angles in everyday objects
* Use formal and informal mathematical language to describe and compare common angles
* Use common geometric instruments to draw two dimensional shapes
* Construct routine three-dimensional objects from given nets
 |  • Written• Practical test• Observation |
| 1. Interpret routine tables, graphs and charts for work
 | * Identify routine tables, graphs and charts in predominately familiar texts and contexts
* Identify common types of graphs and their different uses
* Identify features of tables, graphs and charts
* Locate specific information
* Perform calculations to interpret information
* Explain how statistics can inform and persuade
* Identify misleading statistical information
* Discuss information relevant to the workplace
 | * Oral
* Written
* Practical test
* Observation
 |
| 1. Collect data and construct routine tables and graphs for work
 | * Identify features of common tables and graphs
* Identify uses of **different tables and graphs**
* Determine data and variables to be collected
* Determine audience
* Select a method to collect data
* Collect data
* Collate information in a table
* Determine suitable scale and axes
* Draft and draw graph to present information
* Check that data meets the expected results and context
* Report or discuss information using formal and informal mathematical language
 | * Written
* Practical test
* Observation
 |
| 1. Use basic functions of calculator
 | * Identify and use keys for basic functions on a calculator
* Calculate using whole numbers, money and routine decimals and percentages
* Calculate with routine fractions and percentages
* Apply order of operations to solve multi-step calculations
* Interpret display and record result
* Make estimations to check reasonableness of problem solving process, outcome and its appropriateness to the context and task
* Use formal and informal mathematical language and appropriate symbolism and conventions to communicate the result of the task
 | * Written
* Practical test
* Observation
 |

**Suggested Methods of Instruction**

* Demonstrations
* Role playing
* Viewing of related videos
* Discussion
* Assignments

**Recommended resources**

* Calculators
* Basic measuring instruments

# DIGITAL LITERACY

**UNIT CODE:** AGR/CU/PR/BC/03/5/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Demonstrate Digital Literacy

**Duration of Unit:** 45 hours

**Unit Description**

This unit covers the competencies required to demonstrate digital literacy. It involves identifying appropriate computer software and hardware, applying security measures to data, hardware, software in automated environment, applying computer software in solving tasks, applying internet and email in communication at workplace, applying desktop publishing in official assignment and preparing presentation packages.

**Summary of Learning Outcomes**

1. Identify computer software and hardware
2. Apply security measures to data, hardware, software in automated environment
3. Apply computer software in solving tasks
4. Apply internet and email in communication at workplace
5. Apply desktop publishing in official assignments
6. Prepare presentation packages

**Learning Outcomes, Content and Suggested Assessment Methods**

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Identify computer hardware and software
 | * Concepts of ICT
* Functions of ICT
* History of computers
* Components of a computer
* Classification of computers
 | * Written tests
* Oral presentation
* Observation
 |
| 1. Apply security measures to data, hardware and software
 | * Data security and control
* Security threats and control measures
* Types of computer crimes
* Detection and protection against computer crimes
* Laws governing protection of ICT
 | * Written tests
* Oral presentation
* Observation
* Project
 |
| 1. Apply computer software in solving tasks
 | * Operating system
* Word processing
* Spread sheets
* Data base design and manipulation
* Data manipulation, storage and retrieval
 | * Oral questioning
* Observation
* Project
 |
| 1. Apply internet and email in communication at workplace
 | * Computer networks
* Network configurations
* Uses of internet
* Electronic mail (e-mail) concept
 | * Oral questioning
* Observation
* Oral presentation
* Written report
 |
| 1. Apply desktop publishing in official assignments
 | * Concept of desktop publishing
* Opening publication window
* Identifying different tools and tool bars
* Determining page layout
* Opening, saving and closing files
* Drawing various shapes using DTP
* Using colour pellets to enhance a document
* Inserting text frames
* Importing and exporting text
* Object linking and embedding
* Designing of various publications
* Printing of various publications
 | * Oral questioning
* Observation
* Oral presentation
* Written report
* Project
 |
| 1. Prepare presentation packages
 | * Types of presentation packages
* Procedure of creating slides
* Formatting slides
* Presentation of slides
* Procedure for editing objects
 | * Oral questioning
* Observation
* Oral presentation
* Written report
* Project
 |

**Suggested Methods of Instruction**

* Demonstration
* Viewing of related videos
* Discussions
* Assignments
* Direct instructions

**Recommended Resources**

* Computers
* Other digital devices
* Printers
* Storage devices
* Internet access
* Computer software

# ENTREPRENEURIAL SKILLS

**UNIT CODE:** AGR/CU/PR/BC/04/5/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Demonstrate Entrepreneurship

**Duration of unit:** 70 hours

**Unit Description**

This unit covers the competencies required to demonstrate understanding of entrepreneurship. It involves demonstrating understanding of an entrepreneur, entrepreneurship and self-employment. It also involves identifying entrepreneurship opportunities, creating entrepreneurial awareness, applying entrepreneurial motivation and developing business innovative strategies.

**Summary of Learning Outcomes**

* 1. Demonstrate understanding of an entrepreneur
	2. Demonstrate knowledge of entrepreneurship and self-employment
	3. Identify entrepreneurship opportunities
	4. Create entrepreneurial awareness
	5. Apply entrepreneurial motivation
	6. Develop innovative business strategies
	7. Develop Business plan

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Demonstrate knowledge of entrepreneurship and self-employment
 | * Importance of self-employment
* Requirements for entry into self-employment
* Role of an Entrepreneur in business
* Contributions of Entrepreneurs to National development
* Entrepreneurship culture in Kenya
* Born or made entrepreneurs
 | * Individual/group assignments
* Projects
* Written tests
* Oral questions
* Third party report
* Interviews
 |
| 1. Identify entrepreneurship opportunities
 | * Business ideas and opportunities
* Sources of business ideas
* Business life cycle
* Legal aspects of business
* Assessment of product demand
* Business environment
* Factors to consider when evaluating business environment
* Technology in business
 | * Individual/group assignments
* Projects
* Written tests
* Oral questions
* Third party report
* Interviews
 |
| 1. Create entrepreneurial awareness
 | * Forms of businesses
* Sources of business finance
* Factors in selecting source of business finance
* Governing policies on Small Scale Enterprises (SSEs)
* Problems of starting and operating SSEs
 | * Individual/group assignments
* Projects
* Written tests
* Oral questions
* Third party report
* Interviews
 |
| 1. Apply entrepreneurial motivation
 | * Internal and external motivation
* Motivational theories
* Self-assessment
* Entrepreneurial orientation
* Effective communications in entrepreneurship
* Principles of communication
* Entrepreneurial motivation
 | * Case studies
* Individual/group assignments
* Projects
* Written tests
* Oral questions
* Third party report
* Interviews
 |
| 1. Develop business innovative strategies
 | * Innovation in business
* Small business Strategic Plan
* Creativity in business development
* Linkages with other entrepreneurs
* ICT in business growth and development
 | * Case studies
* Individual/group assignments
* Projects
* Written tests
* Oral questions
* Third party report
* Interviews
 |
| 1. Develop Business Plan
 | * Business description
* Marketing plan
* Organizational/Management
* plan
* Production/operation plan
* Financial plan
* Executive summary
* Presentation of Business Plan
 | * Case studies
* Individual/group assignments
* Projects
* Written tests
* Oral questions
* Third party report
* Interviews
 |

**Suggested Methods of Instruction**

* Direct instruction
* Project
* Case studies
* Field trips
* Discussions
* Demonstration
* Question and answer
* Problem solving
* Experiential
* Team training

**Recommended Resources**

* Case studies
* Business plan templates
* Computers
* Overhead projectors
* Internet
* Mobile phone
* Video clips
* Films
* Newspapers and Handouts
* Business Journals
* Writing materials

# EMPLOYABILITY SKILLS

**UNIT CODE:** AGR/CU/PR/BC/05/5/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Demonstrate Employability Skills

**Duration of Unit:** 50 hours

**Unit Description**

This unit covers competencies required to demonstrate employability skills. It involves conducting self-management, demonstrating interpersonal communication, critical safe work habits, leading a workplace team, planning and organizing work, maintaining professional growth and development, demonstrating workplace learning, problem solving skills and managing workplace ethics.

**Summary of Learning Outcomes**

1. Conduct self-management

2. Demonstrate interpersonal communication

3. Demonstrate critical safe work habits

4. Lead small teams

5. Plan and organize work

6. Maintain professional growth and development

7. Demonstrate workplace learning

8. Demonstrate problem solving skills

9. Demonstrate workplace ethics

**Learning Outcomes, Content and Suggested Assessment Methods**

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Conduct self-management
 | * Self-awareness
* Formulating personal vision, mission and goals
* Strategies for overcoming life challenges
* Emotional intelligence
* Assertiveness versus aggressiveness
* Expressing personal thoughts, feelings and beliefs
* Developing and maintaining high self-esteem
* Developing and maintaining positive self-image
* Articulating ideas and aspirations
* Accountability and responsibility
* Good work habits
* Self-awareness
* Self-development
* Financial literacy
* Healthy lifestyle practices
 | * Written tests
* Oral questioning
* Interviewing
* Portfolio of evidence
* Third party report
 |
| 1. Demonstrate interpersonal communication
 | * Meaning of interpersonal communication
* Listening skills
* Types of audience
* Writing skills
* Reading skills
* Meaning of empathy
* Understanding customers’ needs
* Establishing communication networks
* Sharing information
 | * Written tests
* Oral questioning
* Interviewing
* Portfolio of evidence
* Third party report
 |
| 1. Demonstrate critical safe work habits
 | * Stress and stress management
* Punctuality and time consciousness
* Leisure
* Integratingpersonal objectives into organizational objectives
* Resources utilization
* Setting work priorities
* HIV and AIDS
* Drug and substance abuse
* Handling emerging issues
 | * Written tests
* Oral questioning
* Interviewing
* Portfolio of evidence
* Third party report
 |
| 1. Lead a small team
 | * Leadership qualities
* Team building
* Determination of team roles and objectives
* Team performance indicators
* Responsibilities in a team
* Forms of communication
* Complementing team activities
* Gender and gender mainstreaming
* Human rights
* Maintaining relationships
* Conflicts and conflict resolution
 | * Written tests
* Oral questioning
* Interviewing
* Portfolio of evidence
* Third party report
 |
| 1. Plan and organize work
 | * Functions of management
* Planning
* Organizing
* Time management
* Decision making process
* Task allocation
* Evaluating work activities
* Resource utilization
* Problem solving
* Collecting and organising information
 | * Written tests
* Oral questioning
* Interviewing
* Portfolio of evidence
* Third party report
 |
| 1. Maintain professional growth and development
 | * Opportunities for professional growth
* Assessing training needs
* Licenses and certifications for professional growth and development
* Pursuing personal and organizational goals
* Identifying work priorities
* Recognizing career advancement
 | * Written tests
* Oral questioning
* Interviewing
* Portfolio of evidence
* Third party report
 |
| 1. Demonstrate workplace learning
 | * Managing own learning
* Contributing to the learning community at the workplace
* Cultural aspects of work
* Variety of learning context
* Application of learning
* Safe use of technology
* Identifying opportunities
* Generating new ideas
* Workplace innovation
* Performance improvement
* Handling emerging issues
* Future trends and concerns in learning
 | * Written tests
* Oral questioning
* Interviewing
* Portfolio of evidence
* Third party report
 |
| 1. Demonstrate problem solving skills
 | * Problem identification
* Problem solving
* Application of problem-solving strategies
* Resolving customer concerns
 | * Written tests
* Oral questioning
* Interviewing
* Portfolio of evidence
* Third party report
 |
| 1. Demonstrate workplace ethics
 | * Meaning of ethics
* Ethical perspectives
* Principles of ethics
* Values and beliefs
* Ethical standards
* Organization code of ethics
* Common ethical dilemmas
* Organization culture
* Corruption, bribery and conflict of interest
* Privacy and data protection
* Diversity, harassment and mutual respect
* Financial responsibility/accountability
* Etiquette
* Personal and professional integrity
* Commitment to jurisdictional laws
* Emerging issues in ethics
 | * Written tests
* Oral questioning
* Interviewing
* Portfolio of evidence
* Third party report
 |

**Suggested Methods of Instruction**

* Demonstrations
* Simulation/Role play
* Discussion
* Presentations
* Case studies
* Q&A

**Recommended Resources**

* Computers
* Stationery
* Charts
* Video clips
* Audio tapes
* Radio sets
* TV sets
* LCD projectors

# ENVIRONMENTAL LITERACY

**UNIT CODE:** AGR/CU/PR/BC/06/5/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Demonstrate Environmental Literacy

**Duration of Unit:** 25 hours

**Unit Description**

This unit describes the competencies required to demonstrate understanding of environmental literacy. It involves controlling environmental hazard, controlling control environmental pollution, complying with workplace sustainable resource use, evaluating current practices in relation to resource usage, identifying environmental legislations/conventions for environmental concerns, implementing specific environmental programs and monitoring activities on environmental protection/programs.

**Summary of Learning Outcomes**

1. Control environmental hazards
2. Control environmental Pollution
3. Demonstrate sustainable use of resource
4. Evaluate current practices in relation to resource usage
5. Identify Environmental legislations/conventions for environmental concerns
6. Implement specific environmental programs
7. Monitor activities on Environmental protection/Programs

**Learning Outcomes, Content and Suggested Assessment Methods**

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** |  **Content** | **Suggested Assessment Methods** |
| 1. Control environmental hazards
 | * Purposes and content of Environmental Management and Coordination Act 1999
* Purposes and content of Solid Waste Act
* Storage methods for environmentally hazardous materials
* Disposal methods of hazardous wastes
* Types and uses of PPE in line with environmental regulations
* Occupational Safety and Health Standards (OSHS)
 | * Written test
* Oral questions
* Observation
 |
| 1. Control environmental Pollution control
 | * Types of pollution
* Environmental pollution control measures
* Types of solid wastes
* Procedures for solid waste management
* Different types of noise pollution
* Methods for minimizing noise pollution
 | * Written test
* Oral questions
* Observation
 |
| 1. Demonstrate sustainable resource use
 | * Types of resources
* Techniques in measuring current usage of resources
* Calculating current usage of resources
* Methods for minimizing wastage
* Waste management procedures
* Principles of 3Rs (Reduce, Reuse, Recycle)
* Methods for economizing or reducing resource consumption
 | * Written test
* Oral questions
* Observation
 |
| 1. Evaluate current practices in relation to resource usage
 | * Collection of information on environmental and resource efficiency systems and procedures,
* Measurement and recording of current resource usage
* Analysis and recording of current purchasing strategies.
* Analysis of current work processes to access information and data
* Identification of areas for improvement
 | * Written test
* Oral questions
* Observation
 |
| 1. Identify Environmental legislations/conventions for environmental concerns
 | * Environmental issues/concerns
* Environmental legislations /conventions and local ordinances
* Industrial standard /environmental practices
* International Environmental Protocols (Montreal, Kyoto)
* Features of an environmental strategy
 | * Written questions
* Oral questions
* Observation
 |
| 1. Implement specific environmental programs
 | * Community needs and expectations
* Resource availability
* 5 s of good housekeeping
* Identification of programs/Activities
* Setting of individual roles /responsibilities
* Resolving problems /constraints encountered
* Consultation with stakeholders
 | * Written questions
* Oral questions
* Observation
 |
| 1. Monitor activities on Environmental protection/Programs
 | * Periodic monitoring and Evaluation of activities
* Gathering feedback from stakeholders
* Analysing data gathered
* Documentation of recommendations and submission
* Setting of management support systems to sustain and enhance the program
* Monitoring and reporting of environmental incidents to concerned /proper authorities
 | * Oral questions
* Written tests
* Practical test
* Observation
 |

**Suggested Methods of Instruction**

* Instructor led facilitation of theory
* Demonstration by trainer
* Viewing of related videos
* Project
* Assignements
* Role play

**Recommended Resources**

* Standard operating and/or other workplace procedures manuals
* Specific job procedures manuals
* Environmental Management and Coordination Act 1999
* Machine/equipment manufacturer’s specifications and instructions
* Personal Protective Equipment (PPE)
* ISO standards
* Ccompany environmental management systems (EMS)
* Montreal Protocol
* Kyoto Protocol

# OCCUPATIONAL SAFETY AND HEALTH PRACTICES

**UNIT CODE:** AGR/CU/PR/BC/07/5/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Demonstrate Occupational Safety and Health Practices

**Duration of Unit:** 25 hours

**Unit Description**

This unit specifies the competencies required to identify workplace hazards and risk, identify and implement appropriate control measures and implement OSH programs, procedures and policies/ guidelines

**Summary of Learning Outcomes**

1. Identify workplace hazards and risk
2. Control OSH hazards
3. Implement OSH programs

**Learning Outcomes, Content and Suggested Assessment Methods**

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Identify workplace hazards and risks
 | * Identification of hazards in the workplace and/or the indicators of their presence
* Evaluation and/or work environment measurements of OSH hazards/risk existing in the workplace is conducted by
* Authorized personnel or agency
* Gathering of OHS issues and/or concerns raised
 | * Oral questions
* Written tests
* Portfolio of evidence
* Third party report
 |
| 1. Control OSH hazards
 | * Prevention and control measures, including use of PPE (personal protective equipment) for specific hazards are identified and implemented
* Appropriate risk controls based on result of OSH hazard evaluation is recommended
* Contingency measures, including emergency procedures during workplace incidents and emergencies are recognized and established in accordance with organization procedures
 | * Oral questions
* Written tests
* Portfolio of evidence
* Third party report
 |
| 1. Implement OSH programs
 | * Providing information to work team about company OHS program, procedures and policies/guidelines
* Participating in implementation of OSH procedures and policies/ guidelines
* Training of team members and advice on OSH standards and procedures
* Implementation of procedures for maintaining OSH-related records
 | * Oral questions
* Written tests
* Portfolio of evidence
* Third party report
 |

**Suggested Methods of Instruction**

* Assigments
* Discussion
* Q&A
* Role play
* Viewing of related videos

**Recommended Resources**

* Standard operating and/or other workplace procedures manuals
* Specific job procedures manuals
* Machine/equipment manufacturer’s specifications and instructions
* Personal Protective Equipment (PPE) e.g.
* Mask
* Face mask/shield
* Safety boots
* Safety harness
* Arm/Hand guard, gloves
* Eye protection (goggles, shield)
* Hearing protection (ear muffs, ear plugs)
* Hair Net/cap/bonnet
* Hard hat
* Face protection (mask, shield)
* Apron/Gown/coverall/jump suit
* Anti-static suits
* High-visibility reflective vest

# COMMON UNIT OF LEARNING

# TECHNICAL DRAWING

**UNIT CODE:** AGR/CU/PR/CC/01/5/A

**Relationship to Occupational Standards**

This unit addresses the unit of competency: Prepare and Interpret Technical Drawings

**Duration of Unit:** 30 Hours

**Unit Description**

This unit covers the competencies required to prepare and interpret technical drawings. It involves selecting, using and maintaining drawing equipment and materials and producing plain and solid geometry drawings.

**Summary of Learning Outcomes**

1. Use and maintain drawing equipment and materials
2. Produce plane geometry drawings
3. Produce solid geometry drawings

**Learning Outcomes, Content and Suggested Assessment Methods:**

| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| --- | --- | --- |
| 1. Use and maintain drawing equipment and materials
 | * Identification and care of drawing equipment and materials
* Types of lines in drawings
 | * Oral questioning
* Written tests
* Observation
 |
| 1. Produce plane geometry drawings components
 | * Construction of geometric forms
* Construction of different angles
* Measurement of different angles
* Bisection of different angles and lines
* Standard drawing conventions
 | * Observation
* Written test
* Oral test
 |
| 1. Produce solid geometry drawings
 | * Interpretation of sketches and drawings of patterns e.g. cylinders, prisms and pyramids
* Sectioning of components
* Free hand sketching of tools, equipment, components, geometric forms and diagrams
 | * Practical
* Observation
* Written tests
 |

**Suggested Methods of Instruction**

* Projects
* Demonstration
* Practice by the trainee
* Field trips
* Group discussions
* Direct instructions
* Simulations
* Case studies
* Audio-visual digital presentation

**Recommended Resources**

* + Drawing room
	+ Computer lab
	+ Drawing equipment and materials
	+ Computers
	+ Overhead projector

# CORE UNITS OF LEARNING

# POULTRY PROCESSING PLANT CONSTRUCTION

**UNIT CODE:** AGR/CU/PR/CR/01/5/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Construct Poultry Processing Plant

**Duration of Unit:** 70 hours

**Unit Description**

This unit specifies the competencies required to construct poultry processing plant. It involves designing, building and equipping poultry processing plant and maintaining processing plant equipment records.

**Summary of Learning Outcomes**

1. Design poultry processing plant
2. Build poultry processing plant
3. Equip poultry processing plant
4. Maintain processing plant equipment and records

**Learning Outcomes, Content and Suggested Assessment Methods**

| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| --- | --- | --- |
| 1. Design poultry processing plant
 | * Basic skills in technical drawing
* Environmental management regulations
* Surveying
* Siting and site topography
* Layout sketching
* Factors considered in siting poultry processing plant
* Factors considered when designing poultry processing plant
	+ Number of birds to be slaughtered
	+ Availability of slaughter-stock and seasonality
	+ Nature of end product (hot / chilled poultry carcasses or parts)
	+ Cost of materials
	+ Availability of construction materials
	+ Methods of waste disposal
	+ Equipment and spare-parts availability
	+ Labour requirements- skilled, semi-skilled, unskilled
	+ Type of processing systems
* Occupational safety and health act and precautions
 | * Written tests
* Observation
* Oral questions
* Third party report
* Interviewing
* Log book
 |
| 1. Build poultry processing plant
 | * Site levelling
* Applied building and construction technology- (Masonry, electrical, mechanical and carpentry works)
* Components of poultry processing plant
* Interior designing
* Water and waste disposal systems
* Area measurement
* Facilities required
	+ Live poultry reception area
	+ Stunning area
	+ Bleeding area
	+ Scalding area
	+ Defeathering unit
* Procurement procedures
* Labour laws
 | * Written tests
* Observation
* Oral questions
* Third party report
* Interviewing
* Log book
 |
| 1. Equip poultry processing plant
 | * Types of processing plant equipment
* Equipment installation procedures
	+ The designed throughput of the equipment
	+ The space requirements to operate the equipment
	+ The robustness of the equipment
	+ Specification in terms of power ratings and consumption, pressures, speeds, temperatures etc.
	+ That the equipment meets the legal and safety requirements laid down in law or, in its absence, that of straightforward common sense
* Technical skills for equipping processing plant
* Food processing engineering
 | * Written tests
* Observation
* Oral questions
* Third party report
* Interviewing
* Log book
 |
| 1. Maintain processing plant equipment and records
 | * Basic maintenance skill- servicing, trouble shooting, lubrication, cleaning, storage,
* Equipment maintenance schedules – daily, weekly, monthly and annual
* Record keeping/ Documentation
* SOPs
	+ Running of the machines as per manufacturers manuals
 | * Written tests
* Observation
* Oral questions
* Third party report
* Interviewing
 |

**Suggested Methods of Instruction**

* Demonstration by trainer
* Practice by the trainee
* Field trips
* Discussions
* Audio-visual
* Direct instruction
* Incubation approach

**Recommended Resources**

Functional poultry processing plant with the following:

* Conveyor belt
* Scales
* Washing machines
* Shackles
* Crates
* Weighing scales
* Catching crate
* Washing machines
* Plucker unit
* Decapitator
* Hock cutter
* Hand wash facilities
* Stunning box
* Neck severing knives
* Bleeding troughs
* Scalding tank

#  PRE-SLAUGHTER HANDLING

**UNIT CODE:** AGR/CU/PR/CR/02/5/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Perform Pre- Slaughter Handling

**Duration of Unit:** 60 hours

**Unit Description**

This unit specifies the competencies required to perform pre-slaughter handling. It involves selecting poultry sources, transporting poultry for slaughter, receiving of poultry for slaughter and maintaining pre-slaughter records.

**Summary of Learning Outcomes**

1. Select poultry sources
2. Transport poultry for slaughter
3. Receive poultry for slaughter
4. Maintain poultry pre-slaughter records

**Learning Outcomes, Content and Suggested Assessment Methods**

| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| --- | --- | --- |
| 1. Select poultry sources
 | * Contract farming procedures and regulations
* Poultry production systems,
* Poultry breeds and types
* Types of veterinary health records
* Inventory of poultry farmers around the processing plant
 | * Written tests
* Observation
* Oral questions
* Third party report
* Interviewing
 |
| 1. Transport poultry for slaughter
 | * Veterinary legal requirements in poultry transportation
	+ Animal protection Act
	+ Meat control act
	+ Disease control act
* Types of health records
	+ No objection permits
	+ Health certificates
	+ Movement permit
* Poultry transportation methods and control measures
* Poultry pre-slaughter care
	+ Feed withdrawal at farm level; at least 8hrs
 | * Observation
* Written tests
* Oral questions
* Interviewing
 |
| 1. Receive poultry for slaughter
 | * + Ante-mortem inspection
* Dead on arrival
* General body condition- fractured, stressed birds
	+ Poultry pre-slaughter care and handling
* Weighing
* Stress management- lighting
	+ Legal requirement in poultry reception
	+ Occupational Safety and Health standards.
 | * Observation
* Written tests
* Oral questions
* Interviewing
 |
| 1. Maintain poultry pre-slaughter records
 | * Basic maintenance skill- servicing, trouble shooting, lubrication, cleaning, storage,
* Equipment maintenance schedules – daily, weekly, monthly and annual
* Types of pre-slaughter equipment
	+ Crates, shackles, trolleys,
* Record keeping/ Documentation
 | * Observation
* Written tests
* Oral questions
* Interviewing
 |

**Suggested Methods of Instruction**

* Demonstration by trainer
* Practice by the trainee
* Field trips
* Discussions
* Direct instruction
* Audio-visual

**Recommended Resources**

* Weighing scales
* Catching crate
* Washing machines

# POULTRY SLAUGHTER OPERATIONS

**UNIT CODE:** AGR/CU/PR/CR/03/5/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Perform Poultry Slaughter

**Duration of Unit:** 70 hours

**Unit Description**

This unit specifies the competencies required to perform poultry slaughter. It involves restraining, stunning, bleeding, defeathering scalded, decapitating poultry carcasses, inspection, evisceration and maintaining poultry slaughter equipment and records.

**Summary of Learning Outcomes**

1. Restrain poultry for slaughter
2. Stun restrained poultry
3. Bleed stunned poultry
4. Defeather scalded poultry
5. Decapitate poultry carcasses
6. Conduct post mortem inspection
7. Eviscerate inspected poultry
8. Maintain poultry slaughter records

**Learning Outcomes, Content and Suggested Assessment Methods**

| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| --- | --- | --- |
| * + 1. Restrain poultry for slaughter
 | * Defining restraining
* Methods of restraining
* Restraining equipment and tools
* Types of shackles
 | * Written tests
* Observation
* Oral questions
* Third party report
* Interviewing
 |
| * + 1. Stun restrained poultry
 | * Definition of stunning
* Types and methods of stunners
* Tools and equipment for stunning
 | * Observation
* Written tests
* Oral questions
* Product analysis
* Interviewing
 |
| * + 1. Bleed stunned poultry
 | * Definition of bleeding
* Importance of bleeding
* Effects of improper bleeding
* Bleeding methods
* Bleeding tools and equipment
 | * Observation
* Written tests
* Oral questions
* Product analysis
* Interviewing
 |
| * + 1. Defeather scalded poultry
 | * Definition of scalding and defeathering
* Methods of scalding and defeathering
	+ Manual
	+ Machine
	+ Dry
	+ Wet
 | * Observation
* Written tests
* Oral questions
* Interviewing
 |
| * + 1. Decapitate poultry carcasses
 | * Definition of decapitation
* Methods
	+ Manual
	+ Automated
	+ Tools and equipment
 | * Observation
* Written tests
* Oral questions
* Product analysis
* Interviewing
 |
| * + 1. Conduct post mortem inspection
 | * Definition of PM inspection
* Methods
	+ Visual
	+ Palpation
	+ Incision
	+ Laboratory confirmatory tests
* Certification and approval marks
 | * Observation
* Written tests
* Oral questions
* Product analysis
* Interviewing
 |
| * + 1. Eviscerate inspected poultry
 | * Definition of evisceration
* Importance of evisceration
* Methods and types of evisceration
* Duration within which evisceration is done
* Evisceration tools and equipment
 | * Observation
* Written tests
* Oral questions
* Product analysis
* Interviewing
 |
| * + 1. Maintain poultry slaughter equipment and records
 | * Basic maintenance skill- servicing, trouble shooting, lubrication, cleaning, storage,
* Equipment maintenance schedules – daily, weekly, monthly and annual
* Types of slaughter equipment, tools and records
* Record keeping/ Documentation
* Number of birds slaughtered
* Number of birds/ organs condemned
* Inventory of tools and equipment
 | * Observation
* Written tests
* Oral questions
* Product analysis
* Interviewing
 |

**Suggested Methods of Instruction**

* Project
* Demonstration by trainer
* Practice by the trainee
* Field trips
* Discussions
* Direct instruction
* Audio-visual

**Recommended Resources**

* Stunning box
* Shackles
* Knives
* Blood collection troughs
* Scalding tank
* Plucker unit
* Decapitator
* Washer

# POULTRY MEAT GRADING

**UNIT CODE:** AGR/CU/PR/CR/04/5/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Grade Poultry Meat

**Duration of Unit:** 60 hours

**Unit Description**

This unit specifies the competencies required to grade poultry meat. It involves rating chilled carcass, packaging poultry meat and maintaining grading records.

**Summary of Learning Outcomes**

1. Rate chilled carcass
2. Package poultry meat
3. Maintain grading records

**Learning Outcomes, Content and Suggested Assessment Methods**

| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| --- | --- | --- |
| * + 1. Rate chilled carcass
 | * Define poultry rating / grading
* Grading criteria
	+ Weight
	+ Body condition
* Rating levels
 | * Written tests
* Observation
* Oral questions
* Third party report
* Interviewing
 |
| * + 1. Package poultry meat
 | * Objectives of packaging
* Requirements for packaging materials
* Types of packaging materials
	+ Aluminium foil
	+ Food grade plastics
* Methods of packaging
	+ Vacuum
	+ Paper packaging
	+ Pouches
	+ Canning
	+ Modified atmosphere packaging (MAP)
* Factors affecting/ influencing packaging
	+ Moisture/ water vapour
	+ Oxygen
	+ Other gases
	+ Light
 | * Observation
* Written tests
* Oral questions
* Interviewing
* Third party report
 |
| * + 1. Maintain grading records
 | * Record keeping/ Documentation
* Weight records
* Body defects records
* Score cards
* Inventory of grading tools and equipment
* Weighing balances
 | * Observation
* Written tests
* Oral questions
* Interviewing
* Third party report
 |

**Suggested Methods of Instruction**

* Demonstration by trainer
* Practice by the trainee
* Field trips
* Discussions
* Direct instruction
* Audio-visual

**Recommended Tools and Resources**

* Score cards
* Weiging balances

#  POULTRY MEAT-BASED PRODUCTS PRODUCTION

**UNIT CODE:** AGR/CU/PR/CR/05/5/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Produce Poultry-Based Products

**Duration of Unit:** 80 hours

**Unit Description**

This unit specifies the competencies required to produce poultry-based products. It involves marinating graded poultry portions, processing poultry-based mixture, packaging processed portions and maintaining poultry products records.

**Summary of Learning Outcomes**

1. Marinate graded portions
2. Process poultry-based mixture
3. Package processed portions
4. Maintain poultry products records

**Learning Outcomes, Content and Suggested Assessment Methods**

| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| --- | --- | --- |
| * + - 1. Marinate graded portions
 | * Definition of marination
* Identify tools and equipment for marination
* Process of marination
	+ Weighing spices
	+ Spices mixed with a given volume of water
	+ Portioned poultry meat pieces immersed in the spiced solution overnight
	+ Poultry meat portions removed from the solution, dried and vacuum packed
	+ Vacuum packed marinate preserved in cold storage
 | * Written tests
* Observation
* Oral questions
* Third party report
* Interviewing
 |
| * + - 1. Process poultry-based mixture
 | * Identify tools, equipment and resources for processing poultry-based mixture
* Types of poultry-based products
	+ Poultry meat sausages – fresh, smoked, cooked.
	+ Poultry meat burgers
	+ Poultry meat nuggets
* Steps of processing poultry-based products;
	+ Deboning of portioned poultry meat
	+ Mincing of deboned poultry meat
	+ Weighing of other ingredients and spices
	+ Minced meat and other ingredients mixed
	+ Mixture added to bowl chopper
	+ Poultry meat emulsion filled into casings
	+ Smoking and packaging
 | * Observation
* Written tests
* Oral questions
* Interviewing
* Third party report
 |
| * + - 1. Package processed portions
 | * Objectives of packaging
* Requirements for packaging materials
* Types of packaging materials
	1. Aluminium foil
	2. Food grade plastics
* Methods of packaging
	1. Vacuum
	2. Paper packaging
	3. Pouches
	4. Modified atmosphere packaging (MAP)
* Factors affecting/ influencing packaging
	+ - Moisture/ water vapour
		- Oxygen
		- Other gases
		- Light
 | * Observation
* Written tests
* Oral questions
* Interviewing
* Third party report
 |
| 4. Maintain poultry products records | * Record keeping/ Documentation
	+ Processing equipment maintenance records
	+ Processed products records- weights, manufacture and expiry dates
	+ Processed products quality control records
 | * Observation
* Written tests
* Oral questions
* Interviewing
 |

**Suggested Methods of Instruction**

* Project
* Demonstration by trainer
* Practice by the trainee
* Field trips
* Discussions
* Direct instruction
* Audio-visual

**Recommended tools, equipment and resources**

* Meat mincers
* Knives
* Bowl choppers
* Packaging machines
* Tamblers
* Marination tanks
* Meat emulsion dispensers•
* Casing machines
* Packaging materials
* PPEs

#  POULTRY MEAT SAFETY MANAGEMENT

**UNIT CODE:** AGR/CU/PR/CR/06/5/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Manage Poultry Meat Safety

**Duration of Unit:** 70 hours

**Unit Description**

This unit specifies the competencies required to manage poultry meat safety. It involves monitoring personnel health status, maintaining processing plant hygiene and maintaining poultry meat safety records.

**Summary of Learning Outcomes**

1. Monitor personnel health status
2. Maintain processing plant hygiene
3. Maintain poultry meat safety records

**Learning Outcomes, Content and Suggested Assessment Methods**

| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| --- | --- | --- |
| * + - 1. Monitor personnel health status
 | * Health status requirements for personnel working in a poultry meat processing plant
* Identify tool, equipment and resources required in the maintenance of poultry meat safety
* Personal hygiene practices
 | * Written tests
* Observation
* Oral questions
* Third party report
* Interviewing
 |
| 1. Maintain processing plant hygiene
 | * Definition of terms
* Plant and meat hygiene and sanitation
* Meat safety legal requirements
	+ Public health act Cap 242
	+ Meat control act Cap 356
* Meat safety systems
	+ HACCP- hazard analysis critical control point
	+ GMP- good manufacturing practices
	+ GHP – good hygiene practices
	+ SOPs
 | * Observation
* Written tests
* Oral questions
* Interviewing
* Third party report
 |
| 1. Maintain poultry meat safety records
 | * Record keeping/ Documentation
	+ Poultry meat safety records
	+ Laboratory analysis records
	+ Cleaning and sanitizing schedules
 | * Observation
* Written tests
* Oral questions
* Interviewing
* Third party report
 |

**Suggested Methods of Instruction**

* Project
* Demonstration by trainer
* Practice by the trainee
* Field trips
* Discussions
* Direct instruction
* Audio-visual

**Recommended tools, equipment and resources**

* Soaps and detergents
* PPEs
* Sanitizers
* Bleeding funnels
* Disinfectants
* Stationery
* Soap & sanitizer dispensers•
* Foot baths
* Tools sterilizers
* Blood tanks•

# POULTRY BY-PRODUCTS MANAGEMENT

**UNIT CODE:** AGR/CU/PR/CR/07/5/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Manage Poultry By-Products

**Duration of Unit:** 70 hours

**Unit Description**

This unit specifies the competencies required to manage poultry by-products. It involves rendering poultry blood, managing poultry waste, and managing poultry processing plant waste water and maintaining poultry by-products records.

**Summary of Learning Outcomes**

1. Render poultry blood
2. Manage poultry waste
3. Manage poultry plant processing waste water
4. Maintain poultry by-products records

**Learning Outcomes, Content and Suggested Assessment Methods**

| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| --- | --- | --- |
| 1. Render poultry blood | * Definition of terms
* Importance of proper management of blood
* Blood management/treatment methods: Rendering, Blood centrifugation and separation
 | * Written tests
* Observation
* Oral questions
* Third party report
* Interviewing
 |
| 2. Manage poultry waste | * Definition of terms
* Importance of waste management
* Types of poultry waste: feathers, GIT contents
* Condemned carcases and organs
* Factors influencing waste management
* Waste management systems/ Methods of waste management and disposal
* Legal requirements in waste management
 | * Observation
* Written tests
* Oral questions
* Interviewing
* Third party report
 |
| 1. Manage poultry processing plant waste water
 | * Definition of terms
* Types of poultry processing wastes
* Methods of waste water treatment/management methods
* Water analysis techniques
* Legal requirements in waste water management
 | * Observation
* Written tests
* Oral questions
* Interviewing
* Third party report
 |
| 1. Maintain poultry by-products records
 | * Record keeping/ documentation
* Inventory of different types of poultry by-products
 | * Observation
* Written tests
* Oral questions
* Interviewing
 |

**Suggested Methods of Instruction**

* Project
* Demonstration by trainer
* Practice by the trainee
* Field trips
* Discussions
* Direct instruction
* Audio-visual

**Recommended Resources**

* Rendering machine
* Digesters
* Grease traps
* Filters
* Sedimentation tanks/ basins
* Composter
* Lagoons
* Incinerators
* Condemnation pits

# ADMINISTRATIVE DUTIES PERFORMANCE

**UNIT CODE:** AGR/CU/PR/CR/08/5/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Perform Administrative Duties

**Duration of Unit:** 60 hours

**Unit Description**

This unit specifies the competencies required to perform administrative duties. It involves acquiring poultry firm certification, managing firm personnel, managing firm supplies and maintaining good management practices (GMPs).

**Summary of Learning Outcomes**

1. Acquire poultry firm certification
2. Manage firm personnel
3. Manage firm supplies
4. Maintain good management practices (GMPs).

**Learning Outcomes, Content and Suggested Assessment Methods**

| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| --- | --- | --- |
| 1. Acquire poultry firm certification | * Existing regulation governing construction in the country
* National Construction Authority (NCA)
* National Environmental Management Authority (NEMA)
* Relevant national and international health standards / bio security measures.
* Veterinary regulations
* Public health regulations
* Application for poultry firm certification
* Certifying authorities for hatcheries, slaughter houses and poultry processing plants
* Inspection procedures for hatcheries, slaughter facilities and processing plants.
* Application procedures
 | * Written tests
* Observation
* Oral questions
* Third party report
* Interviewing
 |
| 2. Manage firm personnel | * Human resource and legal regulations governing personnel
* Hiring
* Firing
* Staff discipline
* Terms and conditions of work
* Factors that can influence job performance
* Induction /Coaching and mentoring
* Duty allocation.
* Work environment
* Supervision and training needs

assessment (TNA) * Methods of supervision
* TNA methods
* Performance appraisal and motivation
* Importance of staff appraisal
* Methods of staff appraisal
* Methods of staff motivation
 | * Written tests
* Observation
* Oral questions
* Third party report
* Interviewing
 |
| 1. Manage firm supplies
 | * Procurement procedures/ methods
* Receiving
* Inspection
* Recording
* Inventory records
* Requisitioning
* Issues

- Stock taking | * Written tests
* Observation
* Oral questions
* Third party report
* Interviewing
 |
| 4. Maintain good management practices  (GMPs). | * Good management practices
* Attitude
* Communication
* Core values
* Capacity building
* Administrative records
 | * Written tests
* Observation
* Oral questions
* Third party report
* Interviewing
 |

**Suggested Methods of Instruction**

* Demonstration by trainer
* Practice by the trainee
* Discussions
* Direct instruction
* Role play
* Case studies

**Recommended resources** **•**

Functional poultry enterprise administrative office (Hatchery, Breeding farm, Poultry production farm or poultry procedairy plant) with the following:

* Office
* **Personnel**
* Stationery
* Store
* Computers
* Printers
* Records
* Furniture