****

**REPUBLIC OF KENYA**

**COMPETENCY BASED CURRICULUM**

**FOR**

**MEAT PROCESSING**

**LEVEL 5**



TVET CDACC

P.O. BOX 15745-00100

NAIROBI

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# FOREWORD

The provision of quality education and training is fundamental to the Government’s overall strategy for social economic development. Quality education and training will contribute to achievement Kenya’s development blue print and sustainable development goals.

Reforms in the education sector are necessary for the achievement of Kenya Vision 2030 and meeting the provisions of the Constitution of Kenya 2010. The education sector had to be aligned to the Constitution and this resulted to the formulation of the Policy Framework for Reforming Education. A key feature of this policy is the radical change in the design and delivery of the TVET training. This policy document requires that training in TVET be competency based, curriculum development be industry led, certification be based on demonstration of competence and mode of delivery allows for multiple entry and exit in TVET programmes.

These reforms demand that Industry takes a leading role in curriculum development to ensure the curriculum addresses its competence needs. It is against this background that this Curriculum has been developed.

It is my conviction that this curriculum will play a great role towards development of competent human resource for the meat sector’s growth and sustainable development.

**PRINCIPAL SECRETARY, VOCATIONAL AND TECHNICAL TRAINING**

**MINISTRY OF EDUCATION**

# PREFACE

Kenya Vision 2030 aims to transform the country into a newly industrializing, “middle-income country providing a high-quality life to all its citizens by the year 2030”. Kenya intends to create a globally competitive and adaptive human resource base to meet the requirements of a rapidly industrializing economy through life-long education and training. TVET has a responsibility of facilitating the process of inculcating knowledge, skills and attitudes necessary for catapulting the nation to a globally competitive country, hence the paradigm shift to embrace Competency Based Education and Training (CBET).

The Technical and Vocational Education and Training Act No. 29 of 2013 on Reforming Education and Training in Kenya, emphasized the need toreform curriculum development, assessment and certification. This called for a shift to CBET to address the mismatch between skills acquired through training and skills needed by industry as well as increase the global competitiveness of Kenyan labour force.

TVET Curriculum Development, Assessment and Certification Council (TVET CDACC) in conjunction with meat Sector Skills Advisory Committee (SSAC have developed this curriculum.

This curriculum is designed and organized with an outline of learning outcomes; suggested delivery methods, training/learning resources and methods of assessing the trainee’s achievement. The curriculum is competency-based and allows multiple entry and exit to the course.

I am grateful to the Council Members, Council Secretariat, meat SSAC, expert workers and all those who participated in the development of this curriculum.

**CHAIRPERSON, TVET CDACC**

# ACKNOWLEDGEMENT

This curriculum has been designed for competency-based training and has independent units of learning that allow the trainee flexibility in entry and exit. In developing the curriculum, significant involvement and support was received from various organizations.

I recognize with appreciation the role of the meat Sector Skills Advisory Committee (SSAC) in ensuring that competencies required by the industry are addressed in the curriculum. I also thank all stakeholders in the meat sector for their valuable input and all those who participated in the process of developing this curriculum.

I am convinced that this curriculum will go a long way in ensuring that workers in print meat will acquire competencies that will enable them to perform their work more efficiently.

**COUNCIL SECRETARY/CEO**

**TVET CDACC**

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# ABREVIATIONS AND ACRONYMS

|  |  |
| --- | --- |
| AHITI | Animal Health and Industry Training Institute |
| ATVET | Agricultural Technical and Vocational Education and Training |
| AU - IBAR | African Union – Inter African Bureau for Animal Resources |
| 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 |
| 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 |
| MAP | Modified Atmosphere Packaging |
| MoALF&I | Ministry of Agriculture, Livestock, Fisheries and Irrigation |
| MoE | Ministry of Education |
| MTI  NCA | Meat Training Institute  National Construction Authority |
| NEMA | National Environmental Management Authority |
| NEPAD | New Partnerships for African Development |
| NPCA | NEPAD Planning and Coordinating Agency |
| OIE | World Organization for Animal Health |
| OS | Occupational Standard |
| OSH | Occupational Safety and Health |
| PPE | Personal Protective Equipment |
| SOP | Standard Operation Procedures |
| TVET | Technical and Vocational Education and Training |
| TVETA | Technical and Vocational Education and Training Authority |

# KEY TO UNIT CODE

**MT/ CU/ MP/ BC/ 01/ 5 / A**

Industry or sector

Curriculum

Occupational area

Type of competency

Competency number

Competency level

Version control

# COURSE OVERVIEW

Meat ProcessingCertificate Level 5 qualification consists of units of learning that a person must achieve to manage butchery operations, process meat products, manage inedible meat processing products and meat hygiene

The units of learning leading to Meat ProcessingCertificate Level 5 qualification include the following basic and core units:

**Basic Units of Learning**

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit Code** | **Unit Title** | **Duration in Hours** | **CREDIT FACTORS** |
| MT/CU/MP/BC/01/5/A | Communication Skills | 25 | 3 |
| MT/CU/MP/BC/02/5/A | Numeracy skills | 40 | 4 |
| MT/CU/MP/BC/03/5/A | Digital Literacy | 45 | 5 |
| MT/CU/MP/BC/04/5/A | Entrepreneurial Skills | 70 | 7 |
| MT/CU/MP/BC/05/5/A | Employability Skills | 50 | 5 |
| MT/CU/MP/BC/06/5/A | Environmental Literacy | 25 | 3 |
| MT/CU/MP/BC/07/5/A | Occupational Safety and Health Practices | 25 | 3 |
| **Total** | | **280** | **30** |

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

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit Code** | **Unit Title** | **Duration in Hours** | **CREDIT FACTORS** |
| MT/CU/MP/CR/01/5/A | Butchery operations management | 120 | 12 |
| MT/CU/MP/CR/02/5/A | Meat products processing | 180 | 18 |
| MT/CU/MP/CR/03/5/A | Inedible meat processing products management | 180 | 18 |
| MT/CU/MP/CR/04/5/A | Meat hygiene management | 120 | 12 |
|  | Industrial attachment | 360 | 36 |
| **Total** | | **960** | **96** |
| **GRAND TOTAL** | | **1240** | **126** |

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

The total duration of the course is **1240** hours including industrial attachment.

**Entry Requirements**

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

1. Any meat Artisan Certificate Qualification Level 4

**Or**

1. Attained KCSE with at least D (Plain)

**Or**

1. Equivalent qualifications as determined by Kenya National Qualifications Authority (KNQA)

**Assessment**

The course will be assessed at two levels:

1. **Internal assessment**: conducted continuously by the trainer (internal assessor) who is monitored by an accredited internal verifier.
2. **External assessment:** conducted by an accredited external assessor who is monitored by an accredited external verifier.

The assessors and verifiers are accredited by TVET CDACC which also coordinates external assessment.

**Certification**

On successful completion of a unit of learning, a trainee will be issued with a Certificate of Competence and on successful completion of all units of learning a trainee will be awarded a Meat ProcessingCertificate Level 5 qualification. These certificates will be issued by TVET CDACC in conjunction with training provider.

# BASIC UNITS OF LEARNING

# COMMUNICATION SKILLS

**UNIT CODE:** MT/CU/MP/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 Instructions**

* Role playing
* Viewing of related videos

**Recommended Resources**

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

# NUMERACY SKILLS

**UNIT CODE:** MT/CU/MP/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 Instructions**

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

**Recommended resources**

* Calculators
* Basic measuring instruments

# DIGITAL LITERACY

**UNIT CODE:** MT/CU/MP/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 Instructions**

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

**Recommended Resources**

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

# ENTREPRENEURSHIP SKILLS

**UNIT CODE:** MT/CU/MP/BC/04/5/A

Relationship to occupational standards

This unit addresses the Unit of Competency: Demonstrate Understanding of 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 instructions:**

* 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:** MT/CU/MP/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 Instructions**

* 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:** MT/CU/MP/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 Instructions**

* 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:** MT/CU/MP/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 Instructions**

* 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

# CORE UNITS OF LEARNING

# BUTCHERY OPERATIONS MANAGEMENT

**UNIT CODE:** MT/CU/MP/CR/01/5/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Manage butchery operations**.**

**Duration of Unit:** 120 hours

**Unit Description**

This unit specifies the competencies required to manage butchery operations. It involves transporting animal meat, displaying animal meat in the butchery, carrying out animal meat portioning and; preservation and storage of meat portions.

**Summary of Learning Outcomes**

1. Transport animal meat
2. Display animal meat in the butchery
3. Carry out animal meat portioning
4. Carry out preservation and storage of meat portions

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Transport animal meat | * + Tools and equipment used in meat transport   + Hygiene in meat transportation   + Legislation in meat transportation | * + Observation   + Oral questioning   + Written tests |
| 1. Display animal meat in the butchery | * + Hygiene protocols in butchery   + Legislation in meat display   + Sorting different parts of meat/ species   + Equipment and tools used in meat display | * + Observation   + Oral questioning   + Written tests |
| 1. Carry out animal meat portioning | * + Prepare the carcass for portioning   + Equipment handling and maintenance   + Procedures of meat portioning   + Boning techniques   + Types of meat cuts   + Packaging of meat   + Management of remnants/waste   + Legislation in meat portioning | * + Observation   + Oral questioning   + Written tests |
| 1. Carry out preservation and storage of meat portions | * + Methods of meat preservation   + Factors influencing meat preservation   + Ingredients used in meat preservation   + Equipment used in meat preservation   + Storage of preserved meat | * + Observation   + Oral questioning   + Written tests |

**Suggested Methods of Instruction**

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

**Recommended Resources**

**Tools and equipment**

Butchery equipment

* Deboning knives)
* Sharpening steel
* Chopping boards
* Meat mincers
* Butchers’ cleavers
* Splitting saws axe
* Panga
* Hot water knife sterilizer

Grading equipment

* Grader’s stamp
* Meat marking ink
* Grading benches
* Weighing scale
* Fatometer

**Materials and supplies**

* Stationary
* Detergents
* Disinfectant
* Lubricants
* Portable water
* Sanitizers
* Tissues
* Disposable towels

**Personal protective equipment (PPEs)**

* White gumboots
* White plastic aprons
* White dust coat
* White caps
* White helmets
* Dust masks
* Steel chain gloves
* Disposable gloves
* Safety goggles
* First aid kit

**Facilities**

Offices, hand wash basins, soak pits, toilet and bathrooms, condemnation pits, incinerators, foot bath, footwear washing facilities, dressing rooms, water reservoir, canteen etc.

# MEAT PRODUCTS PROCESSING

**UNIT CODE:** MT/CU/MP/CR/02/5/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: process meat products

**Duration of Unit:** 180 hours

**Unit Description**

This unit specifies the competencies required to process meat products. It involves assessing animal meat quality, processing meat products, packaging and labelling processed meat product and preserving processed meat products.

**Summary of Learning Outcomes**

1. Assess animal meat quality
2. Process meat products
3. Package and label processed meat product
4. Preserve processed meat products

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Assess animal meat quality | * + Objectives of assessing meat quality   + Definition of terminologies   + Factors that influence meat quality   + Methods of assessing meat quality   + Factors that determine type of meat product | * + Observation   + Oral questioning   + Written tests |
| 1. Process meat products | * + Objectives of processing   + Types of processed meat products   + Methods of meat product processing   + Good manufacturing practices (GMP and GHP)   + Legislation in meat products processing | * + Observation   + Oral questioning   + Written tests |
| 1. Package and label processed meat product | * + Objectives of packaging and labeling   + Requirement for packaging materials   + Requirement for labeling   + Types of packaging material   + Methods of packaging/ labeling   + Factors influencing packaging   + Environmental issues related to processing and packaging   + Legislation in meat products packaging and labeling | * + Observation   + Oral questioning   + Written tests |
| 1. Preserve processed meat products | * + Objective of meat preservation   + Principles of meat preservation   + Tools and equipment used in preservation   + Maintenance of tools and equipment   + Factors determining choice of preservation methods   + Meat spoilage and causative factors   + Meat preservation techniques   + Legislation in meat preservation | * + Observation   + Oral questioning   + Written tests |

**Suggested Methods of Instruction**

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

**Recommended Resources**

**Tools and equipment**

* Meat mincers
* Knives
* Packaging materials
* Electric saw
* Chopping surfaces
* Tumblers/meat tenderizer
* Dispensers
* Weighing scales etc

**Materials and supplies**

* Stationary
* Detergents
* Disinfectants
* Lubricants
* Portable water
* Sanitizers
* Tissues
* Disposable towels

**Personal protective equipment (PPEs)**

* White gumboots
* White plastic aprons
* White dust coat
* White caps
* White helmets
* Dust masks
* Steel chain gloves
* Disposable gloves
* Safety goggles
* First aid kit

**Facilities**

Offices, hand wash basins, soak pits, lagoons, toilet and bathrooms, condemnation pits, incinerators, foot bath, footwear washing facilities, dressing rooms, water reservoir, canteen etc.

# INEDIBLE MEAT BY- PRODUCTS MANAGEMET

**UNIT CODE:** MT/CU/MP/CR/03/5/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: manage inedible meat processing products

**Duration of Unit:** 180 hours

**Unit Description**

This unit specifies the competencies required to manage inedible meat processing products. It involves managing meat animal blood, bones, horns and hooves; managing meat animal fats; meat animal ingesta and animal hairs and poultry feathers. It also includes maintaining animal by-products records.

**Summary of Learning Outcomes**

* 1. Managing meat animal blood, bones, horns and hooves
  2. Managing meat animal fats
  3. Managing meat animal ingesta
  4. Managing animal hairs and poultry feathers
  5. Maintain animal by-products records

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Managing meat animal blood, bones, horns and hooves | * + Objectives of managing by-products   + Definition of terminologies   + Preservation methods for blood, bones, horns and hooves   + Utilization of blood, bones, horns and hooves   + Processing of blood, bones, horns and hooves products   + Legislation related to animal by-products | * Written tests * Observation * Oral questioning |
| 1. Managing meat animal fats | * + Objectives of managing fats   + Definition of terminologies   + Preservation methods for fats   + Utilization of fats   + Processing of fats products | * Written tests * Observation * Oral questioning |
| 1. Managing meat animal ingesta | * + Objectives of managing ingesta   + Definition of terminologies   + Collection method for ingesta   + Processing and utilization of ingesta | * Written tests * Observation * Oral questioning |
| 1. Managing animal hairs and poultry feathers | * + Objectives of managing hairs and feathers   + Definition of terminologies   + Preservation methods for animal hairs and poultry feathers Processing and utilization of animal hairs and poultry feathers | * Written tests * Observation * Oral questioning |
| 1. Maintain animal by-products records | * + Objectives of record keeping   + Types of records and documents   + Methods of record keeping   + Document management | * Written tests * Observation * Oral questioning |

**Suggested Methods of Instruction**

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

**Recommended resources**

**Tools and equipment**

* Wheelbarrows
* Forklifts
* Trimming knives
* Buckets
* Blood tanks
* Washbasins
* Weighing balance

**Materials and supplies**

* Stationary
* Detergents
* Disinfectants
* Lubricants
* Portable water
* Sanitizers
* Tissues
* Disposable towels etc

**Personal protective equipment (PPEs)**

* Safety boots
* Plastic aprons
* Dust coat
* Safety helmets
* Dust masks
* Disposable gloves
* Safety goggles
* First aid kit

**Facilities**

Hand washing basins, soak pits, lagoons, toilet and bathrooms, condemnation pits, incinerators, foot bath, footwear washing facilities, dressing rooms, water reservoir, canteen, processing rooms etc

# FOOD SAFETY SYSTEMS MANAGEMENT

**UNIT CODE:** MT/CU/MP/CR/04/5/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: manage food safety systems

**Duration of Unit:** 120 hours

**Unit Description**

This unit specifies the competencies required to manage food safety systems. It involves managing personnel hygiene, facility hygiene, equipment hygiene and product hygiene. It also includes managing environmental hygiene.

**Summary of Learning Outcomes**

1. Manage personnel hygiene
2. Manage facility hygiene
3. Manage equipment hygiene
4. Manage product hygiene
5. Manage environmental hygiene

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Manage personnel hygiene | * + Definition of terminologies   + Objectives of personnel hygiene   + Personnel hygiene   + Personal hygiene practices   + Legal requirements in personnel hygiene | * + Observation   + Oral questioning   + Written tests |
| 1. Manage facility hygiene | * + Objectives of facility hygiene   + Cleaning and washing procedures   + Detergents and disinfectants   + Water quality   + Cleaning tools and equipment | * + Observation   + Oral questioning   + Written tests |
| 1. Manage equipment hygiene | * + Objective’s equipment hygiene management   + Equipment cleaning and washing procedures   + Equipment disinfection and sterilization | * + Observation   + Oral questioning   + Written tests |
| 1. Manage product hygiene | * + Objective’s product hygiene management   + Hygiene protocols in product hygiene management   + Safe handling of products   + Product safety assessment   + Disposal of condemned products | * + Observation   + Oral questioning   + Written tests |
| 1. Manage environmental hygiene | * + Objectives of environmental hygiene management   + Solid and liquid wastes management   + Drainage system management   + Environmental impact assessment   + Effects of climate change on environmental hygiene   + Legislation in environmental hygiene   + Vermin and pest control | * + Observation   + Oral questioning   + Written tests |

**Suggested Methods of Instruction**

* Demonstration by trainer
* Practice by the trainee
* Field trips
* Discussions
* Viewing of related videos
* Direct instruction

**Recommended Resources**

**Tools and equipment**

* Wheel barrows
* Hose pipe
* Slaughter benches
* Panga
* Sharpening steel
* Hot water knife sterilizer
* Brooms, squeezers
* Hand brushes
* Buckets etc

**Materials and supplies**

* Stationary
* Detergents
* Disinfectants
* Lubricants
* Portable water
* Sanitizers
* Tissues
* Disposable towels etc

**Personal protective equipment (PPEs)**

* White gumboots
* White plastic aprons
* White dust coat
* White caps
* White helmets
* Dust masks
* Heavy cold room clothing
* Disposable gloves
* Safety goggles

**Facilities**

Offices, hand wash basins, soak pits, blood tanks, lagoons, toilet and bathrooms, condemnation pits, incinerators, foot bath, footwear washing facilities, dressing rooms, water reservoir, manure shed, hides and skins store, trippery etc