****

**REPUBLIC OF KENYA**

**COMPETENCY BASED CURRICULUM**

**FOR**

**FIRE MANAGEMENT**

**(TECHNICAL RESCUE)**

**LEVEL 4**



First published 2020

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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 of Kenya’s development blueprint 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 and Training (Sessional Paper No. 4 of 2016). A key feature of this policy is the radical change in the design and delivery of 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 Disaster Management Sector’s growth and 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 and Sessional Paper No. 4 of 2016 on Reforming Education and Training in Kenya, emphasized the need to reform 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 labor force.

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

This curriculum has been developed following the CBET framework policy; the CBETA Standards and guidelines provided by the TVET Authority and the Kenya National Qualification framework designed by the Kenya National Qualification Authority.

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, Fire Management SSAC, expert workers and all those who participated in the development of this curriculum.

**CHAIRPERSON, TVET CDACC**

# ACKNOWLEDGMENT

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 Fire Management 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 Disaster Management 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 Disaster Management Sector acquire competencies that will enable them to perform their work more efficiently.

**CEO/COUNCIL SECRETARY**

**TVET CDACC**

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# **ABBREVIATIONS AND ACRONYMS**

A Control version

AIDS Acquired Immunodeficiency Syndrome

BC Basic Unit

CBET Competency Based Education and Training

CC Common unit

CDACC Curriculum Development Assessment Certification Council

CEO Council Secretary

CR Core Unit

CU Curriculum

DM Disaster Management

FM Fire Management

HIVAcquired Immunodeficiency Virus

KCSE Kenya Certificate of Secondary Education

KNQA Kenya National Qualifications Authority

LCD Liquid Crystal Display

OSH Occupational Safety and Health

PESTEL Political Environmental Social Technological Economic Legal

PPE Personal Protective Equipment

Q&A Questions and Answer

SSAC Sector Skills Advisory Committee

SWOT Strength Weakness Opportunity Threat

TVET Technical and Vocational Education and Training

**KEY TO UNIT CODE**

 **DS/CU/FM/BC/01/4/A**

Industry or sector

Curriculum

Occupational area

Type of competency

Competency number

Competency level

Version control

# COURSE OVERVIEW

**Description of the Course**

Fire fighter level 4 (Technical rescuer) qualification consists of competencies that a person must achieve to enable him/her to effectively fight fire outbreak, offer emergency medical care, conduct rope rescue, prevent fire outbreak, conduct structural rescue and conduct road traffic accident rescue.

**Units of Learning**

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** |
| **DM/CU/FM/BC/01/4/A** | Communication Skills | 20 | 2.0 |
| **DM/CU/FM/BC/02/4/A** | Numeracy Skills | 25 | 2.5 |
| **DM/CU/FM/BC/03/4/A** | Digital Literacy | 35 | 3.5 |
| **DM/CU/FM/BC/04/4/A** | Entrepreneurial Skills | 60 | 6.0 |
| **DM/CU/FM/BC/05/4/A**  | Employability Skills | 30 | 3.0 |
| **DM/CU/FM/BC/06/4/A** | Environmental Literacy | 20 | 2.0 |
| **DM/CU/FM/BC/07/4/A** | Occupational Safety and Health Practices | 20 | 2.0 |
| **Subtotal 1** | 210 | 21.0 |

**Common Units of Learning**

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit Code** | **Unit Title** | **Duration in Hours** | **Credit Factor** |
| **DM/CU/FM/CC/01/4/A** | **Fire Service** | **20** | **2.0** |
| **Subtotal 2** | **20** | **2.0** |

**Core Units of Learning**

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit Code** | **Unit Title** | **Duration in Hours** | **Credit Factor** |
| **DM/CU/FM/CR/01/4/A** | Fire Fighting  | **30** | **3** |
| **DM/CU/FM/CR/02/4/A** | Emergency Medical Care  | **40** | **4** |
| **DM/CU/FM/CR/03/4/A** | Rope Rescue  | **60** | **6** |
| **DM/CU/FM/CR/04/4/A** | Fire Prevention  | **30** | **3** |
| **DM/CU/FM/CR/05/4/A** | Structural Rescue  | **60** | **6** |
| **DM/CU/FM/CR/06/4/A** |  Road Traffic Accident Rescue  | **40** | **4** |
| **DM/CU/FM/CR/07/4/A** | Industrial Attachment | **300** | **30** |
| **Subtotal 3** | **260** | **26.0** |
| **GRAND TOTAL**  | **790** | **79.0** |

The total duration of the course is. 790 hours

**Entry Requirements**

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

Kenya Certificate of Secondary Education (KCSE) grade E

 **Or**

Fire management Level 3 qualifications

 **Or**

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

**Trainer qualification**

The trainer for this course must have a qualification higher than these course

**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 the responsibility of TVET CDACC.

**Certification**

A candidate will be issued with a Record of Achievement for each Unit of Competency. To attain the National Certificate Level 4 Fire Management (Technical Rescuer), 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 the training provider.

# BASIC UNITS OF LEARNING

# COMMUNICATION SKILLS

**UNIT CODE: DM/CU/FM/BC/01/4/A**

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Demonstrate Communication Skills

**Duration of Unit:** 20 Hours

**Unit Description**

This unit covers the competencies required demonstrate communication skills. It involves obtaining and conveying workplace information, completing relevant work-related documents, communicating information about workplace processes, leading workplace discussion and communicating workplace issues.

**Summary of Learning Outcomes**

1. Obtain and convey workplace information
2. Complete relevant work-related documents
3. Communicate information about workplace processes
4. Lead workplace discussions
5. Identify and communicate issues arising in the workplace

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Obtain and convey workplace information
 | * Communication process
* Modes of communication
* Medium of communication
* Effective communication
* Barriers to communication
* Flow of communication
* Sources of information
* Types of questions
* Organizational policies
* Workplace etiquette
* Ethical work practices in handling communication
 | * Interview
* Third party reports
 |
| 1. Complete relevant work-related documents
 | * Types and purposes of workplace documents and forms
* Methods used in filling forms and documents
* Recording workplace data
* Process of distributing workplace forms and documents
* Report writing
* Types of workplace reports
 | * Interview
* Third party reports
 |
| 1. Communicate information about workplace processes
 | * 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
 | * Interview
* Portfolio
 |
| 1. Lead workplace discussion
 | * Methods of discussion e.g.
	+ Coordination meetings
	+ Toolbox discussion
	+ Peer-to-peer discussion
* Solicitation of response
 | * Interview
* Third party reports
 |
| 1. Identify and communicate issues arising in the workplace
 | * Identification of problems and issues
* Organizing information on problems and issues
* Relating problems and issues
* Communication barriers affecting workplace discussions
 | * Interview
* Portfolio
 |

**Suggested Methods of Instruction**

* Direct instruction
* Demonstration
* Practice assignment
* Discussion
* Role play
* Brainstorming

**Recommended Resources**

* Desktop computers/laptops
* Internet connection
* Projectors
* Telephone
* Report writing templates

# NUMERACY SKILLS

**UNIT CODE:** **DM/CU/FM/BC/02/4/A**

**Relationship to Occupational Standards:**

This unit addresses the Unit of Competency: Demonstrate Numeracy Skills

**Duration of Unit:** 25hours

**Unit Description**

This unit covers the competencies required to demonstrate numeracy skills. It involves identifying and using whole numbers and simple fractions, decimals and percentages for work, identifying, measuring and estimating familiar quantities for work, reading and using familiar maps, plans and diagrams for work, identifying and describing common 2D and some 3D shapes for work, constructing simple tables and graphs for work using familiar data and identifying and interpreting information in familiar tables, graphs and charts for work.

**Summary of Learning Outcomes**

1. Identify and use whole numbers and simple fractions, decimals and percentages for work
2. Identify, measure and estimate familiar quantities for work
3. Read and use familiar maps, plans and diagrams for work
4. Identify and describe common 2D and some 3D shapes for work
5. Construct simple tables and graphs for work using familiar data
6. Identify and interpret information in familiar tables, graphs and charts for work

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Identify and use whole numbers and simple fractions, decimals and percentages for work
 | * Whole numbers
* Simple fractions
* Decimals
* Percentages
* Sizes
* Problem solving methods
* Calculations using the 4 operations
* Recording and communicating numerical information
 | * Written
* Practice assignments
 |
| 1. Identify, measure and estimate familiar quantities for work
 | * Measurement information
* Units of measurement
* Estimate familiar and simple amounts
* Selection of appropriate measuring equipment
* Calculate using familiar units of measurement
* Check measurements and results against estimates
* Using informal and some formal mathematical and general language
* Record or report results
 | * Written
* Practice assignments
 |
| 1. Read and use familiar maps, plans and diagrams for work
 | * Maps, plans and diagrams
* Locate items and places in familiar maps, plans and diagrams
* Recognize common symbols and keys in familiar maps, plans and diagrams
* Direction and location of objects, or route or places
* Use of informal and some formal oral mathematical language and symbols
 | * Practical test
* Written
 |
| 1. Identify and describe common 2D and some 3D shapes for work
 | * Common 2D shapes and 3D shapes
* Classification of common 2D shapes and designs
* Description of Use informal and some formal language to describe common two-dimensional shapes and some common three-dimensional shapes
* Construction of common 2D shapes
* Match common 3D shapes to their 2D sketches or nets
 | * Written
* Practical test
 |
| 5. Construct simple tables and graphs for work using familiar data | * Types of graphs
* Determination of data to be collected
* Selection of data collection method
* Collection of data
* Determination of variables from the data collected
* Order and collate data
* Construct a table and enter data
* Construct a graph using data from table
* Check results
* Report or discuss graph information related to work using informal and some formal mathematical and general language
 | * Written
* Practical test
 |
| 6. Identify and interpret information in familiar tables, graphs and charts for work | * Tables construction and labeling
* i.e. title, headings, rows and columns
* Interpreting information and data in simple tables
* Relaying information of relevant workplace tasks on/in a table
* Identify familiar graphs and charts in familiar texts and contexts
* Locate title, labels, axes, scale and key from familiar graphs and charts
* Identify and interpret information and data in familiar graphs and charts
* Relate information to relevant workplace tasks
 | * Written
* Practical test
 |

**Suggested Methods of Instruction**

* Instructor led facilitation of theory
* Practical demonstration of tasks by trainer
* Practice by trainees/ role play
* Discussion
* Observations and comments and corrections by trainers

**Recommended Resources**

* Computers
* Stationery
* Charts
* Video clips
* Audio tapes
* LCD projectors
* Standard operating and/or other workplace procedures manuals
* Specific job procedures manuals
* Projectors
* Writing boards
* Mathematical tables

# DIGITAL LITERACY

**UNIT CODE: DM/CU/FM/BC/03/4/A**

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Demonstrate Digital Literacy

**Duration of Unit:** 35 hours

**Unit Description**

This unit covers the competencies required to demonstrate digital literacy in a working environment. It entails identifying computer software and hardware, applying security measures to data, hardware, software, applying computer software in solving task sand applying internet and email in communication at workplace.

**Summary of Learning Outcomes**

1. Identify computer software and hardware
2. Apply security measures to data, hardware and software
3. Apply computer software in solving tasks
4. Apply internet and email in communication at workplace

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Identify computer hardware and software
 | * Meaning of a computer
* Functions of a computer
* Components of a computer
* Classification of computers
 | * Written tests
* Oral
* 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
 | * Written tests
* Oral presentation
* Observation
* Projects
 |
| 1. Apply computer software in solving tasks
 | * Operating system
* Word processing
* Spread sheets
* Data base
 | * Oral questioning
* Observation
* Project
 |
| 1. Apply internet and email in communication at workplace
 | * Computer networks
* Uses of internet
* Electronic mail (e-mail) concept
 | * Oral questioning
* Observation
* Oral presentation
* Written report
 |

**Suggested Methods of Instruction**

* Instructor led facilitation of theory
* Demonstration by trainer
* Practical assignment
* Viewing of related videos
* Project
* Group discussions

**Recommended Resources**

* Desktop computers
* Laptop computers
* Other digital devices
* Printers
* Storage devices
* Internet access

Computer software

# ENTREPRENEURIAL SKILLS

**UNIT CODE: DM/CU/FM/BC/04/4/A**

**Relationship to occupational standards**

This unit addresses the Unit of Competency: Demonstrate Entrepreneurial Skills

**Duration of unit:** 60 hours

**Unit description**

This unit covers the competencies required for creating and maintaining small scale business, establishing small business customer base, managing and growing a micro/small-scale business.

**Summary of Learning Outcomes**

1. Create and maintain small scale business
2. Establish small scale business customer base
3. Manage small scale business
4. Grow/expand small scale business

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Create and maintain small scale business
 | * + Starting a small business
	+ Legal regulatory requirements in starting a small business
	+ SWOT/ PESTEL analysis
	+ Conducting market/industry survey
	+ Generation and evaluation of business ideas
	+ Matching competencies with business opportunities
* Forms of business ownership
* Location of a small business
* Legal and regulatory requirement
	+ Resources required to start a small business
	+ Common terminologies in entrepreneurship
	+ Entrepreneurship in national development
	+ Self-employment
	+ Formal and informal employment
	+ Entrepreneurial culture
	+ Myths associated with entrepreneurship
	+ Types, characteristics, qualities & role of entrepreneurs
	+ History, development and importance of entrepreneurship
	+ Theories of entrepreneurship
	+ Quality assurance for small businesses
	+ Policies and procedures on occupational safety and health and environmental concerns
 | * + Individual/group assignments
	+ projects
	+ Written
	+ Oral
 |
| 1. Establish small scale business customer base
 | * + Good staff/workers and customer relations
	+ Marketing strategy
	+ Identifying and maintain new customers and markets
	+ Product/ service promotions
	+ Products / services diversification
	+ SWOT / PESTEL analysis
	+ Conducting a business survey
	+ Generating Business ideas
	+ Business opportunities
 | * + Individual/group assignments
	+ projects
	+ Written
	+ Oral
 |
| 1. Manage small scale business
 | * Organization of a small business
* Small business’ business plan
* Marketing for small businesses
* Managing finances for small business
* Production/ operation process for goods/services
* Small business records management
* Book keeping and auditing for small businesses
* Business support services
* Small business resources mobilization and utilization
* Basic business social responsibility
* Management of small business
* Word processing concepts in small business management
	+ Computer application software
	+ Monitoring and controlling business operations
 | * + Oral
	+ Individual/group assignments
	+ projects
	+ Written
 |
| 1. Grow/expand small scale business
 | * + Methods of growing small business
	+ Resources for growing small business
	+ Small business growth plan
	+ Computer software in business development
	+ ICT and business growth
 | * + Individual/group assignments
	+ projects
	+ Written
 |

**Suggested Methods of Instruction**

* Instructor led facilitation of theory
* Demonstration by trainer
* Practice by trainee
* Role play
* Case study

**Recommended Resources**

* Case studies for small businesses
* Business plan templates
* Lap top/ desk top computer
* Internet
* Telephone
* Writing materials

# EMPLOYABILITY SKILLS

**UNIT CODE:** DM/CU/FM/BC/05/4/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Demonstrate Employability Skills

**Duration of Unit:** 30 hours

**Unit Description**

This unit covers competencies required to demonstrate employability skills. It involves conducting self-management, demonstrating critical safe work habits, demonstrating workplace learning and workplace ethics.

**Summary of Learning Outcomes**

1. Conduct self-management
2. Demonstrate critical safe work habits
3. Demonstrate workplace learning
4. 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
* 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
* Portfolio of evidence
* Third party report
 |
| 1. Demonstrate critical safe work habits
 | * Stress and stress management
* Punctuality and time consciousness
* Interpersonal communication
* Sharing information
* 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
* Portfolio of evidence
* Third party report
 |
| 1. Demonstrate workplace learning
 | * Personal training needs identification and assessment
* 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
* Workplace innovation
* Performance improvement
* Handling emerging issues
* Future trends and concerns in learning
 | * Written tests
* Oral questioning
* 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
* Portfolio of evidence
* Third party report
 |

**Suggested Methods of Instruction**

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

**Recommended Resources**

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

# ENVIRONMENTAL LITERACY

**UNIT CODE: DM/CU/FM/BC/06/4/A**

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Demonstrate Environmental Literacy

**Duration of Unit:** 20hours

**Unit Description**

This unit specifies the competencies required to demonstrate environmental literacy. It involves controlling environmental hazard, controlling environmental pollution, demonstrating sustainable resource use and evaluating current practices in relation to resource usage.

**Summary of Learning Outcomes**

1. Control environmental hazard
2. Control environmental pollution
3. Demonstrate sustainable use of resources
4. Evaluate current practices in relation to resource usage

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Control environmental hazard
 | * 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 tests
* Oral questions
* Observation of work procedures
 |
| 1. Control environmental Pollution
 | * 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 tests
* Oral questions
* Observation of work procedures
* Role play
 |
| 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 tests
* Oral questions
* Observation of work procedures
 |
| 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 tests
* Oral questions
* Observation of work procedures
 |
| 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 tests
* Oral questions
* Observation of work procedures
 |

**Suggested Methods of Instruction**

* Instructor led facilitation of theory
* Practical demonstration of tasks by trainer
* Practice by trainees/ role play
* Discussion
* Observations and comments and corrections by trainers

**Recommended Resources**

* Computers
* Stationery
* Charts
* Video clips
* Audio tapes
* Radio sets
* TV sets
* LCD projectors
* Standard operating and/or other workplace procedures manuals
* Specific job procedures manuals
* Machine/equipment manufacturer’s specifications and instructions
* Personal Protective Equipment (PPE)

# OCCUPATIONAL SAFETY AND HEALTH PRACTICES

**UNIT CODE:** DM/CU/FM/BC/07/4/A

**Relationship to Occupational Standards**

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

**Duration of Unit:** 20 hours

**Unit Description**

This unit specifies the competencies required to practice safety and health and comply with OSH requirements relevant to work. It involves adhering to workplace procedures for hazards and risk prevention and participating in arrangements for workplace safety and health maintenance.

**Summary of Learning Outcomes**

1. Adhere to workplace procedures for hazards and risk prevention
2. Participate in arrangements for workplace safety and health maintenance

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment****Methods** |
| 1. Adhere to workplace procedures for hazards and risk prevention
 | * Arrangement of work area and items in accordance with Company housekeeping procedures
* Adherence to work standards and procedures
* Application of preventive and control measures, including use of safety gears/PPE
* Study and apply standards and procedures for incidents and emergencies.
 | * + Oral questions
	+ Written tests
	+ Portfolio of evidence
	+ Third party report
 |
| 1. Participate in arrangements for workplace safety and health maintenance
 | * Participating in orientations on OSH requirements/regulations of tasks
* Providing feedback on health, safety, and security concerns to appropriate personnel as required in a sufficiently detailed manner
* Practice workplace procedures for reporting hazards, incidents, injuries and sickness
* OSH requirements/ regulations and workplace safety and hazard control procedures are reviewed, and compliance reported to appropriate personnel
* Identification of needed OSH-related trainings are proposed to appropriate personnel
 | * + 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**

* Computers
* Stationery
* Charts
* Video clips
* Audio tapes
* Radio sets
* TV sets
* LCD projectors
* 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 bootsn
* 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 UNITS OF LEARNING

# FIRE SERVICE

**UNIT CODE:** **DM/CU/FM/CC/01/4/A**

**Relationship to Occupational Standards**

This unit addresses the unit of competency: manage fire service.

**Duration of Unit: 20 hours**

**Unit Description**

This unit specifies the competencies required manage fire service. It involves performing paramilitary functions and managing emergency incident operations.

**Summary of Learning Outcomes**

1. Perform paramilitary function
2. Manage emergency Incident operations

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Perform paramilitary function
 | * Importance of chain of command
* Commands
* Foot drills
* Parade formation
 | * Oral questions
* Written tests
* Observation
 |
| 1. Manage emergency Incident operations
 | * Scene identification
* Dispatch
* Scene size up
* Scene safety
* Resource allocation
* Scene monitoring
* Scene debrief
 | * Oral questions
* Written tests
* Practical test
* Observation
 |

**Suggested Methods of Instruction**

* Instructor led facilitation of theory
* Demonstration by trainer
* Practical work by trainee
* Viewing of related videos

**Recommended Resources**

* Standard operating and/or other workplace procedures manuals
* Specific job procedures manuals
* Uniform
* Personal Protective Equipment (PPE) e.g.
* Mask
* Tunic
* Safety boots
* Legging
* Gloves
* Eye protection (goggles, shield)
* Hearing protection (ear muffs, ear plugs)
* Flash hood
* Jump suit
* Radios

# CORE UNITS OF LEARNING

# FIRE FIGHTING

**UNIT CODE:** DM/CU/FM/CR/01/4/A

**Relationship to Occupational Standards**

This unit addresses the unit of competency: Fight fire outbreak

**Duration of Unit:** 30 **hours**

**Unit Description**

This unit specifies the competencies required to fight fire outbreak. It involves determining type of fire, determining firefighting medium, obtaining firefighting equipment, managing scene safety, saving life of casualties, conducting property salvage and making- up the firefighting tools and equipment.

**Summary of Learning Outcomes**

1. Determine type of fire
2. Determine firefighting medium
3. Obtain firefighting equipment
4. Manage scene-safety
5. Save life of casualties
6. Conduct property Salvage
7. Make- up the firefighting tools and equipment

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Determine type of fire
 | * Emergency call procedure
* Fire science
* Elements of fire
* Classes of fire
	+ Stages of fire development
	+ Methods of fire spread
	+ Compartment fire behaviour
 | * Oral questions
* Written tests
* Observation
 |
| 1. Determine firefighting medium
 | * + Classes of fire
	+ Characteristics of fire
	+ Fire load
	+ Method of fire extinction
	+ Firefighting Media
 | * Oral questions
* Written tests
* Observation
 |
| 1. Obtain firefighting equipment
 | * + Fire intensity
	+ Types of firefighting equipment
	+ Uses of firefighting equipment
	+ Types of automated fire detection systems
 | * Oral questions
* Written tests
* Observation
 |
| 1. Manage scene-safety
 | * + Scene size-up
	+ Incident command systems
	+ PPEs
	+ Hazardous material
 | * Oral questions
* Written tests
* Observation
 |
| 1. Save life of casualties
 | * + Nature of incidents
	+ Safety of casualty
	+ Casualty evacuation procedures
 | * Oral questions
* Written tests
* Observation
 |
| 1. Conduct property Salvage
 | * + Nature of incidents
	+ Fire suppression
	+ Methods of fire suppression
	+ Importance of property salvage
	+ Dos and donts in property salvage
	+ Handing over of salvaged property
 | * Oral questions
* Written tests
* Observation
 |
| 1. Make- up the firefighting tools and equipment
 | * + Management of firefighting tools and equipment
	+ Stowing
	+ Locker drill
 | * Oral questions
* Written tests
* Observation
 |

**Suggested Methods of Instruction**

* Instructor led facilitation of theory
* Demonstration by trainer
* Practical work by trainee
* Viewing of related videos
* Training guides
* Simulations

**Recommended Resources**

* Projectors
* Stationery
* Fire engine
* Water points
* Hydrants
* PPEs
* Portable pumps
* Hoses
* Communication equipment

# EMERGENCY MEDICAL CARE

**UNIT CODE:** DM/CU/FM/CR/02/4/A

**Relationship to Occupational Standards**

This unit addresses the unit of competencies offer emergency medical care.

**Duration of Unit:** 40 hours

**Unit Description**

This unit specifies the competencies required to offer emergency medical care. It involves performing patient assessment, treating the casualty condition, performing casualty re-assessment, preparing patient care report and handing over the casualty.

**Summary of Learning Outcomes**

1. Perform patient assessment
2. Treat the casualty condition
3. Perform casualty re-assessment
4. Prepare patient care report
5. Hand over the casualty

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Perform patient assessment
 | * + Scene size-up
	+ Anatomy
	+ Physical assessment
	+ Rapid assessment
	+ Detailed assessment
	+ Taking vitals
	+ Conscious and non-conscious casualty
 | * + Oral questions
	+ Written tests
	+ Observation
 |
| 1. Treat the casualty condition
 | * + Nature of incidents
	+ Trauma
	+ Medical
	+ Interventions measures
	+ First aid
	+ Cardiopulmonary resuscitation
 | * + Oral questions
	+ Written tests
	+ Observation
 |
| 1. Perform casualty re-assessment
 | * + Casualty re-assessment
	+ Importance of patient re-assessment
 | * + Oral questions
	+ Written tests
	+ Observation
 |
| 1. Prepare patient care report
 | * + Sections of patient care report
	+ Importance of patient care report
 | * + Oral questions
	+ Written tests
	+ Observation
 |
| 1. Hand over the casualty
 | * + Importance of handing over
	+ Importance of briefing next care giver
 | * + Oral questions
	+ Written tests
	+ Observation
 |

**Suggested Methods of Instruction**

* Instructor led facilitation of theory
* Demonstration by trainer
* Practical work by trainee
* Viewing of related videos
* Training guides
* Simulation

**Recommended Resources**

* Projectors
* Laptops
* Stationery
* PPEs
* Medical kits
* Manikin
* Ambulance
* Lifting and carrying equipment
* Stretchers
* Spine boards

# ROPE RESCUE

**UNIT CODE: DM/CU/FM/CR/03/4/A**

**Relationship to Occupational Standards**

This unit addresses the unit of competency: conduct rope rescue

**Duration of Unit:** 60 hours

**Unit Description**

This unit specifies the competencies required to conduct rope rescue. It involves conducting scene size up, preparing rescue lines, tools and equipment, making rescue knots, preparing rescue system, rescuing casualty, making up the rescue tools and equipment and preparing incidents report.

**Summary of Learning Outcomes**

1. Conduct scene size up
2. Prepare rescue lines, tools and equipment
3. Make rescue knots
4. Prepare rescue system
5. Rescue casualty
6. Make up the rescue tools and equipment
7. Prepare incident reports

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Conduct scene size up
 | * Nature of incident
* Safety
* Bystander
* Self
* Casualty
* Safety measures
* Identification of hazard
* Condoning
* Engaging security personnel
* Resource implication
 | * Oral questions
* Written tests
* Observation
 |
| 1. Prepare rescue lines, tools and equipment
 | * Types of ropes and lines
* Rope rescue gears
* Procedure of preparing ropes and rescue lines
 | * Oral questions
* Written tests
* Observation
 |
| 1. Make rescue knots
 | * Types of knots
* Usage of knots
* Procedure of making knots
 | * Oral questions
* Written tests
* Observation
 |
| 1. Prepare rescue system
 | * Types of rescue system
* Safety anchor points
* Factors that determine type of rescue system
 | * Oral questions
* Written tests
* Observation
 |
| 1. Rescue the casualty
 | * First aid procedures
* Hoisting and lowering of rescuer
* Packaging of casualty
* Methods of attaching casualty to rescuer
* Signal communication
 | * Oral questions
* Written tests
* Observation
 |
| 1. Make up the rescue tools and equipment
 | * Collection and accounting for rescue tools and equipment
* Checking usability of rescue tools and equipment
* Storage of rescue tools and equipment
 | * Oral questions
* Written tests
* Observation
 |
| 1. Prepare incident reports
 | * Sections of the incident report
* Importance of incident report
 | * Oral questions
* Written tests
* Observation
 |

**Suggested Methods of Instruction**

* Instructor led facilitation of theory
* Demonstration by trainer
* Practical work by trainee
* Viewing of related videos
* Training guides
* Simulation

**Recommended Resources**

* Projectors
* Stationery
* PPEs
* Ropes and lines
* Rescue gears
* Medical kits
* Lifting and carrying equipment
* Safety reflectors
* Stretchers
* Connecting gadgets
* Torches and lights
* Ropes

# FIRE PREVENTITION

**UNIT CODE: DM/CU/FM/CR/04/4/A**

**Relationship to Occupational Standards**

This unit addresses unit of competency: prevent fire outbreak

**Duration of Unit:** 30 hours

**Unit Description**

This unit specifies the competencies required to prevent fire outbreak. It involves conducting fire risk assessment, sensitizing community on fire risk, advising on fire suppression and preparing risk assessment report.

**Summary of Learning Outcomes**

1. Conduct fire risk assessment
2. Sensitize community on fire risk
3. Advise on fire suppression
4. Prepare risk assessment report

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Conduct fire risk assessment
 | * Area of operation
* Types of structure
* Fire risks and hazards
* Record keeping
 | * Oral questions
* Written tests
* Observation
 |
| 1. Sensitize community on fire risk
 | * Fire science
* Fire risk assessment
* Fire risk reduction
* Importance of sensitization
* Ways of sensitization
 | * Oral questions
* Written tests
* Observation
 |
| 1. Advise on fire suppression
 | * Fire extinction
* Methods of fire extinction
* Firefighting media
* Types of fire extinguishers
* Usage of fire extinguisher
 | * Oral questions
* Written tests
* Observation
 |
| 1. Prepare risk assessment report
 | * Sections of risk assessment report
* Importance of risk assessment report
 | * Oral questions
* Written tests
* Observation
 |

**Suggested Methods of Instruction**

* Instructor led facilitation of theory
* Demonstration by trainer
* Practical work by trainee
* Viewing of related videos
* Simulation

**Recommended Resources**

* Fixed installation
* Portable fire extinquishers
* Stationery
* Cameras
* Personal Protective Equipment (PPE)
* Projectors
* White boards
* Phones

# STRUCTURAL RESCUE

**UNIT CODE: DM/CU/FM/CR/05/4/A**

**Relationship to Occupational Standards**

This unit addresses the unit of competency: conduct structural rescue

**Duration of Unit:** 60 hours

**Unit Description**

This unit specifies the competencies required to conduct structural rescue. It involves

Establishing need for search and rescue, conducting scene size up, assembling search and rescue tools and equipment, performing the search, effecting the rescue and making -up the rescue tools and equipment.

**Summary of Learning Outcomes**

1. Establish need for search and rescue
2. Conduct scene size up
3. Assemble search and rescue tools and equipment
4. Conduct casualty search and rescue
5. Make up the rescue tools and equipment
6. Prepare incident reports

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Establish need for search and rescue
 | * Emergency call handling procedures
* Call receiving
* Call documentation
* Nature of incidence
* Resource implication
* Dispatch
* Post-dispatch
 | * Oral questions
* Written tests
* Observation
 |
| 1. Conduct scene size up
 | * Safety
* Rescuer
* By stander
* Casualty
* Safety measures
* Identification of hazard
* Condoning
* Engaging security personnel
* Resource implication
 | * Oral questions
* Written tests
* Observation
 |
| 1. Assemble search and rescue tools and equipment
 | * Search and rescue tools and equipment
* Uses of search and rescue tools and equipment
* Sorting and assembling of search and rescue tools and equipment
 | * Oral questions
* Written tests
* Observation
 |
| 1. Conduct casualty search and rescue
 | * Building materials
* Architectural designs
* Elements of a structure
* Structural collapse
 | * Oral questions
* Written tests
* Observation
 |
| 1. Make up the rescue tools and equipment
 | * Collection and accounting for rescue tools and equipment
* Checking usability of rescue tools and equipment
* Storage of rescue tools and equipment
 | * Oral questions
* Written tests
* Observation
 |
| 1. Prepare incident reports
 | * Sections of the incident report
* Importance of incident report
 | * Oral questions
* Written tests
* Observation
 |

**Suggested Methods of Instruction**

* Instructor led facilitation of theory
* Demonstration by trainer
* Practical work by trainee
* Viewing of related videos

**Recommended Resources**

* Fixed installation
* Portable fire extinquishers
* Stationery
* Cameras
* Personal Protective Equipment (PPE)
* Projectors
* Laptops
* White boards
* Self-contained breathing apparatus
* Ladders
* Torches and lights
* Breaking-in gears
* Rescue ropes and line

Condoning tapes

Safety cones

Safety reflectors

# ROAD TRAFFIC ACCIDENT RESCUE

**UNIT CODE:** DM/CU/FM/CR/06/4/A

**Relationship to Occupational Standards**

This unit addresses the unit of competency: conduct road traffic accident rescue.

**Duration of Unit:** 40 hours

**Unit Description**

This unit specifies the competencies required to conduct road traffic accident rescue .It involves conducting scene size up, assembling rescue tools and equipment, managing casualty condition, extricating trapped casualty, making -up the rescue tools and equipment and preparing incidents reports.

**Summary of Learning Outcomes**

1. Conduct scene size up
2. Assemble extrication tools and equipment
3. Manage casualty condition
4. Extricate trapped casualty
5. Make -up the rescue tools and equipment
6. Prepare incident reports

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Conduct scene size up
 | * Safety
* Rescuer
* By stander
* Casualty
* Safety measures
* Identification of hazard
* Condoning
* Engaging security personnel
* Resource implication
 | * Oral questions
* Written tests
* Observation
 |
| 1. Assemble extrication tools and equipment
 | * Extrication tools and equipment
* Uses of extrication tools and equipment
* Usability checks on extrication tools and equipment
* Sorting of extrication tools and equipment
 | * Oral questions
* Written tests
* Observation
 |
| 1. Manage casualty condition
 | * Casualty safety
* Patient assessment
* Interventions
* Fracture management
* Bleeding and shock management
* Cardio pulmonary resuscitation
 | * Oral questions
* Written tests
* Observation
 |
| 1. Extricate trapped casualty
 | * Packaging
* Lifting and carrying
* Extrication procedures
 | * Oral questions
* Written tests
* Observation
 |
| 1. Make -up the rescue tools and equipment
 | * Collection and accounting for rescue tools and equipment
* Checking usability of rescue tools and equipment
* Storage of rescue tools and equipment
 | * Oral questions
* Written tests
* Observation
 |
| 1. Prepare incident reports
 | * Sections of the incident report
* Importance of incident report
 | * Oral questions
* Written tests
* Observation
 |

**Suggested Methods of Instruction**

* Instructor led facilitation of theory
* Demonstration by trainer
* Practical work by trainee
* Viewing of related videos

**Recommended Resources**

* Fixed installation
* Portable fire extinquishers
* Stationery
* Cameras
* Personal Protective Equipment (PPE)
* Projectors
* Laptops
* White boards
* Cutting tools
* Glass management tools
* Winches
* Seat belt cutters
* Pedal cutters
* Cade
* C-colla
* Torches and lights
* Fire extinguishers
* Fire engine
* Condoning tapes
* Safety cones
* Safety reflectors