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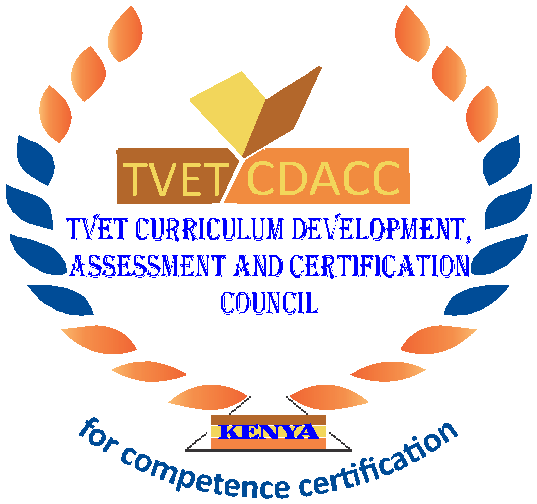
**REPUBLIC OF KENYA**

**NATIONAL OCCUPATIONAL STANDARDS**

**FOR**

**FIREFIGHTER**

**LEVEL 6**



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 of Kenya’s development blueprint, Vision 2030 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 of Kenya 2010 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 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 these Occupational Standards were developed for the purpose of developing a competency-based curriculum for firefighter. These Occupational Standards will also be the bases for assessment of an individual for competence certification.

It is my conviction that these Occupational Standards will play a great role towards development of competent human resource for 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 in order 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.

The TVET Curriculum Development, Assessment and Certification Council (TVET CDACC), in conjunction with Fire Sector Skills Advisory Committee (SSAC) have developed these Occupational Standards for Firefighter. These standards will be the bases for development of competency-based curriculum for Fire Management Level 6.

The occupational standards are designed and organized with clear performance criteria for each element of a unit of competency. These standards also outline the required knowledge and skills as well as evidence guide.

I am grateful to the Council Members, Council Secretariat, Fire SSAC, expert workers and all those who participated in the development of these Occupational Standards.

**Prof. CHARLES M. M. ONDIEKI, PhD, FIET (K), Con. EngTech.**

**CHAIRMAN, TVET CDACC**

# ACKNOWLEDGMENT

These Occupational Standards were developed through combined effort of various stakeholders from private and public organizations. I am thankful to the management of these organizations for allowing their staff to participate in this course. I wish to acknowledge the invaluable contribution of industry players who provided inputs towards the development of these Standards.

I thank TVET Curriculum Development, Assessment and Certification Council (TVET CDACC) for providing guidance on the development of these Standards. My gratitude goes to Fire Sector Skills Advisory Committee (SSAC) members for their contribution to the development of these Standards. I thank all the individuals and organizations who participated in the validation of these Standards.

I acknowledge all other institutions which in one way or another contributed to the development of these Standards.

**CHAIRMAN**

**FIRE SECTOR SKILLS ADVISORY COMMITTEE**

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# **ACRONYMS**

TVET Technical and Vocational Education and Training

CDACC Curriculum Development Assessment and Certification Council

CBET Competency Based Education and Training

SSAC Sector Skills Advisory Committee

BC Basic Competency

CC Core Competency

OSHA Occupation Safety and Health Act

PPE Personal Protective Equipment

SOP Standard operating procedures

OS Occupational Standards

# KEY TO UNIT CODE

DS/OS/FIR/BC/01/6/A

Industry or sector

Occupational Standards

Occupational area

Type of competency

Competency number

Competency level

Version control

# COURSE OVERVIEW

Fire fighter level 6 qualification consists of competencies that a person must achieve to enable him/her to effectively manage fire service, fight fire outbreak, prevent fire outbreak, manage firefighting resources, conduct search and rescue, offer first aid, perform emergency vehicle operations and manage hazardous material incident.

The units of competency leading to Firefighter Certificate level 6 qualification include the following basic, common and core competencies:

**BASIC UNITS OF COMPETENCY**

|  |  |  |
| --- | --- | --- |
| **S/No.** | **UNIT CODE** | **UNIT TITLE** |
|  | DS/OS/FIR/BC/01/6/A | Demonstrate communication skills |
|  | DS/OS/FIR/BC/02/6/A | Demonstrate numeracy skills |
|  | DS/OS/FIR/BC/03/6/A | Demonstrate digital literacy |
|  | DS/OS/FIR/BC/04/6/A | Demonstrate entrepreneurial skills |
|  | DS/OS/FIR/BC/05/6/A | Demonstrate employability skills |
|  | DS/OS/FIR/BC/06/6/A | Demonstrate environmental literacy |
|  | DS/OS/FIR/BC/07/6/A | Demonstrate occupational safety and health practices |

**COMMON UNIT**

|  |  |  |
| --- | --- | --- |
|  | **DS/OS/FIR/CC/01/6/A** | Manage Fire Service |

**CORE UNITS OF COMPETENCY**

|  |  |  |
| --- | --- | --- |
| **S/No.** | **UNIT CODE** | **UNIT TITLE** |
|  | DS /OS/FIR/CR/01/6/A | Fight Fire Outbreak |
|  | DS /OS/FIR/CR/02/6/A | Prevent Fire Outbreak |
|  | DS /OS/FIR/CR/03/6/A | Manage Firefighting Resources |
|  | DS /OS/FIR/CR/04/6/A | Conduct Search and Rescue |
|  | DS /OS/FIR/CR/05/6/A | Offer First Aid |
|  | DS /OS/FIR/CR/06/6/A | Perform Emergency Vehicle Operations |
|  | DS /OS/FIR/CR/07/6/A | Manage Hazardous Material Incident |

# BASIC UNITS OF COMPETENCY

# DEMONSTRATE COMMUNICATION SKILLS

**UNIT CODE:** DM/OS/FIR/BC/01/6/A

**UNIT DESCRIPTION**

This unit covers the competencies required to demonstrate communication skills. It involves meeting communication needs of clients and colleagues, developing communication strategies, establishing and maintaining communication pathways, conducting interviews, facilitating group discussion and representing the organization.

**ELEMENTS AND PERFORMANCE CRITERIA**

|  |  |
| --- | --- |
| **ELEMENT**  These describe the key outcomes which make up workplace function | **PERFORMANCE CRITERIA**  These are assessable statements which specify the required level of performance for each of the elements.  ***Bold and italicized terms are elaborated in the Range*** |
| 1. Meet communication needs of clients and colleagues | 1. Specific communication needs of clients and colleagues are identified and met based on workplace requirements 2. Different communication approaches are identified and applied according to clients’ needs 3. Conflict is identified and addressed as per the standards of the organization |
| 1. Develop communication strategies | * 1. Strategies for effective internal and external dissemination of information are developed as per organization’s requirements   2. Special communication needs are considered in developing strategies according workplace procedures   3. ***Communication strategies*** are analyzed, evaluated and revised based the workplace needs |
| 1. Establish and maintain communication pathways | * 1. Pathways of communication are established as per organization policy   2. Pathways are maintained and reviewed according to organization procedures |
| 1. Promote use of communication strategies | * 1. Information is provided to all areas of the organization as per strategy requirements   2. Effective communication techniques are articulated and modeled according work requirements   3. Personnel are given guidance about adapting communication strategies as per organization procedures |
| 1. Conduct interview | 1. A range of appropriate communication strategies are employed in ***interview situations*** based on the workplace requirements 2. Records of interviews are made and maintained in accordance with organizational procedures 3. Effective questioning, listening and nonverbal communication techniques are used as per needs |
| 1. Facilitate group discussion | 1. Mechanisms to enhance ***effective group interaction*** are identified and implemented according to workplace requirements 2. Strategies to encourage group participation are identified and used as per organizations’ procedures 3. Meetings objectives and agenda are set and followed based on workplace requirements 4. Relevant information is provided and feedback obtained according to set protocols 5. Evaluation of group communication strategies is undertaken in accordance with workplace guidelines 6. Specific communication needs of individuals are identified and addressed as per individual needs |
| 1. Represent the organization | 1. 7Relevant presentation are researched and presented based on internal or external communication forums requirements 2. Presentation is delivered in a clear and sequential manner as per the predetermined time 3. Presentation is made as per appropriate media 4. Difference views are respected based on workplace procedures 5. Written communication is done as per organizational standards 6. Inquiries are responded according to organizational standard |

**RANGE**

This section provides work environment and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

|  |  |
| --- | --- |
| **Variable** | **Range** |
| 1. Communication strategies may include but not limited to: | * Language switch * Comprehension check * Repetition * Asking confirmation * Paraphrase * Clarification request * Translation * Restructuring * Approximation * Generalization |
| 1. Effective group interaction may include but not limited to: | * Identifying and evaluating what is occurring within an interaction in a nonjudgmental way * Using active listening * Making decision about appropriate words, behavior * Putting together response which is culturally appropriate * Expressing an individual perspective * Expressing own philosophy, ideology and background and exploring impact with relevance to communication |
| 1. Situations may include but not limited to: | * Establishing rapport * Eliciting facts and information * Facilitating resolution of issues * Developing action plans * Diffusing potentially difficult situations |

**REQUIRED SKILLS AND KNOWLEDGE**

This section describes the skills and knowledge required for this unit of competency.

**Required Skills**

The individual needs to demonstrate the following skills:

* Communication
* Active listening
* Interpretation
* Negotiation
* Writing

**Required Knowledge**

The individual needs to demonstrate knowledge of:

* Communication process
* Dynamics of groups
* Styles of group leadership
* Key elements of communications strategy

**EVIDENCE GUIDE**

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

|  |  |
| --- | --- |
| 1. Critical aspects of Competency | Assessment requires evidence that the candidate:   1. Developed communication strategies to meet the organization requirements and applied in the workplace 2. Established and maintained communication pathways for effective communication in the workplace 3. Used communication strategies involving exchanges of complex oral information |
| 1. Resource Implications | The following resources should be provided:   1. Access to relevant workplace or appropriately simulated environment where assessment can take place 2. Materials relevant to the proposed activity or tasks |
| 1. Methods of Assessment | Competency in this unit may be assessed through:   1. Direct observation 2. Oral questioning 3. Written texts |
| 1. Context of Assessment | Competency may be assessed:   1. On-the-job 2. Off-the –job 3. During Industrial attachment |
| 1. Guidance information for assessment | Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. |

# DEMONSTRATE NUMERACY SKILLS

**UNIT CODE:** DM/OS/FIR/BC/02/6/A

**UNIT DESCRIPTION**

This unit describes the competencies required to demonstrate numeracy skills. It involves; applying a wide range of mathematical calculations for work; applying ratios, rates and proportions to solve problems; estimating, measuring and calculating measurement for work; using detailed maps to plan travel routes for work; using geometry to draw and construct 2D and 3D shapes for work; collecting, organizing and interpreting statistical data; using routine formula and algebraic expressions for work and using common functions of a scientific calculator.

**ELEMENTS AND PERFORMANCE CRITERIA**

|  |  |
| --- | --- |
| **ELEMENT**  These describe the key outcomes which make up workplace function. | **PERFORMANCE CRITERIA**  These are assessable statements which specify the required level of performance for each of the elements.  ***Bold and italicized terms*** ***are elaborated in the Range.*** |
| 1. Apply a wide range of mathematical calculations for work | * 1. Mathematical information embedded in a range of workplace tasks and texts is extracted as per workplace procedures.   2. Mathematical information is interpreted and comprehended as per job specifications   3. A range of mathematical and problem solving processes are selected and used as per job specification   4. Different forms of fractions, decimals and percentages are flexibly used as per SOPs   5. Calculation performed with positive and negative numbers as per SOPs   6. Numbers are expressed as powers and roots and are used in calculations as per SOPs   7. Calculations done using routine formulas as per SOPs   8. Estimation and assessment processes are used to check outcome as per workplace procedures   9. Mathematical language is used to discuss and explain the processes, results and implications of the task as per workplace procedures |
| 1. Use and apply ratios, rates and proportions for work | * 1. Information regarding ratios, rates and proportions extracted from a range of workplace tasks and texts as per SOPs   2. Mathematical information related to ratios, rate and proportions is analysed as per SOPs   3. Problem solving processes are used to undertake the task as per workplace procedures   4. Equivalent ratios and rates are simplified as per SOPs   5. Quantities are calculated using ratios, rates and proportions as per SOPS   6. Graphs, charts or tables are constructed to represent ratios, rates and proportions as per SOPs   7. The outcomes reviewed and checked as per job specifications   8. Information is record using mathematical language and symbols as per workplace procedures |
| 1. Estimate, measure and calculate measurement for work | * 1. Measurement information embedded in workplace texts and tasks are extracted and interpreted as per job specifications   2. Appropriate workplace measuring equipment are identified and selected as per job specifications   3. Accurate measurements are estimated and made as per SOPs   4. The area of ***2D shapes*** including compound shapes are calculated as per SOPs   5. The volume of 3D shapes is calculated using relevant formulas as per SOPs   6. Sides of right angled triangles are calculated using Pythagoras’ theorem as per SOPs   7. conversions are perform between units of measurement as per job specification   8. Problem solving processes are used to undertake the task as per workplace Procedures   9. The measurement outcomes are reviewed and checked as per workplace procedures   10. Information is recorded using mathematical language and symbols appropriate for the task as per workplace procedures |
| 1. Use detailed maps to plan travel routes for work | * 1. Different types of maps are identified and interpreted as per job requirements   2. Key features of maps are identified as per job requirements   3. Scales are identified and interpreted as per job requirements   4. Scales are applied to calculate actual distances   5. Positions or locations are determined using directional information as per job requirements   6. Routes are planned by determining directions and calculating distances, speeds and times as per job requirements   7. Information is gathered and identified and relevant factors related to planning a route checked as per job requirements   8. Relevant equipment is select and checked for accuracy and operational effectiveness as per job requirements   9. Task is planned and recorded using specialized mathematical language and symbols appropriate for the task as per job requirements |
| 1. Use geometry to draw 2D shapes and construct 3D shapes for work | * 1. A range of 2D shapes and 3D shapes and their uses in work contexts is identified as per job specifications   2. Features of 2D and 3D shapes are named and described as per job specifications   3. Types of angles in 2D and 3D shapes are identified as per job specifications   4. Angles are drawn, estimated and measured using geometric instruments as per job requirements   5. Angle properties of 2D shapes are named and identified as per SOPs   6. Angle properties are used to evaluate unknown angles in shapes as per SOPs   7. Properties of perpendicular and parallel lines are applied to shapes as per SOPs   8. Understanding and use of symmetry is demonstrated as per SOPs   9. Understanding and use of similarity is demonstrated as per SOPs   10. The workplace tasks and mathematical processes required are identified as per workplace procedures   11. 2D shapes is drawn for work as per job specification   12. 3D shapes is constructed for work as per job specification   13. The outcomes are reviewed and checked as per workplace procedures   14. Specialized mathematical language and symbols appropriate for the task are used as per SOPs |
| 1. Collect, organize, and interpret statistical data for work | * 1. Workplace issue requiring investigation are identified as per workplace procedures   2. Audience / population / sample unit is determined as per workplace procedures as per workplace procedures   3. Data to be collected is identified as per workplace procedures   4. Data collection method is selected as per workplace procedures   5. Appropriate statistical data is collected and organized as per SOPs   6. Data is illustrated in appropriate formats as per SOPs   7. The effectiveness of different types of graphs are compared as per SOPs   8. The summary statistics for collected data is calculated as per SOPs   9. The results / findings are interpreted as per SOPs   10. Data is checked to ensure that it meets the expected results and content as per workplace procedures   11. Information from the results including tables, graphs and summary statistics is extracted and interpreted as per workplace procedure   12. Mathematical language and symbols are used to report results of investigation as per workplace procedure |
| 1. Use routine formula and algebraic expressions for work | * 1. Understanding of informal and symbolic notation, representation and conventions of algebraic expressions is demonstrated as per SOPs   2. Simple algebraic expressions and equations are developed as per job specification   3. Operate on algebraic expressions as per job requirement   4. Algebraic expressions are simplified as per job requirement   5. Substitution into simple routine equations is done as per SOPs   6. Routine formulas used for work tasks are identified and comprehended as per SOPs   7. Routine formulas are evaluate by substitution as per SOPs   8. Routine formulas transposed as per SOPs   9. Appropriate formulas are identified and used for work related tasks as per workplace procedures   10. Outcomes are checked and result of calculation used as per workplace procedures |
| 1. Use common functions of a scientific calculator for work | * 1. Required numerical information to perform tasks is located as per job specification   2. The order of operations and function keys necessary to solve mathematical calculation are determined as per job specification   3. Function keys on a scientific calculator are identified and used as per SOPs   4. Estimations are referred to check reasonableness of problem solving process as per workplace procedures   5. Appropriate mathematical language, symbols and conventions are used to report results as per workplace procedures |

**RANGE**

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

|  |  |
| --- | --- |
| **Variable** | **Range** |
| 1. 2D shapes may include but not limited may include but not limited to: | * Triangles * Square * Rectangle * Triangle |

**REQUIRED SKILLS AND KNOWLEDGE**

This section describes the skills and knowledge required for this unit of competency.

**Required Skills**

The individual needs to demonstrate the following skills:

* Measuring
* Logical thinking
* Computing
* Drawing of graphs
* Applying mathematical formulas
* Analytical

**Required knowledge**

The individual needs to demonstrate knowledge of:

* Types of common shapes
* Differentiation between two dimensional shapes / objects
* Formulae for calculating area and volume
* Types and purpose of measuring instruments
* Units of measurement and abbreviations
* Fundamental operations (addition, subtraction, division, multiplication)
* Rounding techniques
* Types of fractions
* Different types of tables and graphs
* Meaning of graphs, such as increasing, decreasing, and constant value
* Preparation of basic data, tables & graphs

**EVIDENCE GUIDE**

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

|  |  |
| --- | --- |
| 1. Critical aspects of Competency | Assessment requires evidence that the candidate:   1. Developed communication strategies to meet the organization requirements and applied in the workplace 2. Established and maintained communication pathways for effective communication in the workplace 3. Used communication strategies involving exchanges of complex oral information |
| 1. Resource Implications | The following resources should be provided:   1. Access to relevant workplace or appropriately simulated environment where assessment can take place 2. Materials relevant to the proposed activity or tasks |
| 1. Methods of Assessment | Competency in this unit may be assessed through:   1. Observation 2. Oral questioning 3. Written test 4. Portfolio of Evidence 5. Interview 6. Third party report |
| 1. Context of Assessment | Competency may be assessed:   1. On-the-job 2. Off-the –job 3. During Industrial attachment |
| 1. Guidance information for assessment | Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. |

# DEMONSTRATE DIGITAL LITERACY

**UNIT CODE:** DM/OS/FIR/BC/03/6/A

**UNIT DESCRIPTION**

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

**ELEMENTS AND PERFORMANCE CRITERIA**

|  |  |
| --- | --- |
| **ELEMENT**  These describe the key outcomes which make up workplace function | **PERFORMANCE CRITERIA**  These are assessable statements which specify the required level of performance for each of the elements.  ***Bold and italicized terms are elaborated in the Range*** |
| 1. Identify appropriate computer software and hardware | * 1. Concepts of ICT are determined in accordance with computer equipment   2. Classifications of computers are determined in accordance with manufacturers specification   3. Appropriate computer software is identified according to manufacturer’s specification   4. Appropriate computer hardware is identified according to manufacturer’s specification   5. Functions and commands of operating system are determined in accordance with manufacturer’s specification |
| 1. Apply security measures to data, hardware, software in automated environment | * 1. ***Data security and privacy are classified*** in accordance with the prevailing technology   2. ***Security threats*** reidentified ***and control measures*** are applied in accordance with laws governing protection of ICT   3. Computer threats and crimes are detected in accordance to Information Management security guidelines   4. Protection against computer crimes is undertaken in accordance with laws governing protection of ICT |
| 1. Apply computer software in solving tasks | * 1. ***Word processing concepts*** are applied in resolving workplace tasks, report writing and documentation as per the job requirements   2. ***Word processing utilities*** are applied in accordance with workplace procedures   3. Worksheet layout is prepared in accordance with work procedures   4. Worksheet is built and data manipulated in the worksheet in accordance with workplace procedures   5. Continuous data manipulated on worksheet is undertaken in accordance with work requirements   6. Database design and manipulation is undertaken in accordance with office procedures   7. Data sorting, indexing, storage, retrieval and security is provided in accordance with workplace procedures |
| 1. Apply internet and email in communication at workplace | * 1. Electronic mail addresses are opened and applied in workplace communication in accordance with office policy   2. Office internet functions are defined and executed in accordance with office procedures   3. ***Network configuration*** is determined in accordance with office operations procedures   4. Official World Wide Web is installed and managed according to workplace procedures |
| 1. Apply Desktop publishing in official assignments | * 1. Desktop publishing functions and tools are identified in accordance with manufactures specifications   2. Desktop publishing tools are developed in accordance with work requirements   3. Desktop publishing tools are applied in accordance with workplace requirements   4. Typeset work is enhanced in accordance with workplace standards |
| 1. Prepare presentation packages | * 1. Types of presentation packages are identified in accordance with office requirements   2. Slides are created and formulated in accordance with workplace procedures   3. Slides are edited and run-in accordance with work procedures   4. Slides and handouts are printed according to work requirements |

**RANGE**

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

|  |  |
| --- | --- |
| **Variable** | **Range** |
| 1. Appropriate computer hardware may include but not limited to: | Collection of physical parts of a computer system such as:   * Computer case, monitor, keyboard, and mouse * All the parts inside the computer case, such as the hard disk drive, motherboard and video card |
| 1. Data security and privacy may include but not limited to: | * Confidentiality of data * Cloud computing * Integrity -but-curious data surfing |
| 1. Security and control measures may include but not limited to: | * Counter measures against cyber terrorism * Risk reduction * Cyber threat issues * Risk management * Pass-wording |
| 1. Security threats may include but not limited to: | * Cyber terrorism * Hacking |

**REQUIRED SKILLS AND KNOWLEDGE**

This section describes the skills and knowledge required for this unit of competency.

**Required Skills**

The individual needs to demonstrate the following skills:

* Analytical skills
* Interpretation
* Typing
* Communication
* Computing (applying fundamental operations such as addition, subtraction, division and multiplication)
* Using calculator
* Basic ICT skills

**Required Knowledge**

The individual needs to demonstrate knowledge of:

* Software concept
* Functions of computer software and hardware
* Data security and privacy
* Computer security threats and control measures
* Technology underlying cyber-attacks and networks
* Cyber terrorism
* Computer crimes
* Detection and protection of computer crimes
* Laws governing protection of ICT
* Word processing;
* Functions and concepts of word processing.
* Documents and tables creation and manipulations
* Mail merging
* Word processing utilities
* Spread sheets;
* Meaning, formulae, function and charts, uses and layout
* Data formulation, manipulation and application to cells
* Database;
* Database design, data manipulation, sorting, indexing, storage retrieval and security
* Desktop publishing;
* Designing and developing desktop publishing tools
* Manipulation of desktop publishing tools
* Enhancement of typeset work and printing documents
* Presentation Packages;
* Types of presentation Packages
* Creating, formulating, running, editing, printing and presenting slides and handouts
* Networking and Internet;
* Computer networking and internet.
* Electronic mail and world wide web
* Emerging trends and issues in ICT;
* Identify and integrate emerging trends and issues in ICT
* Challenges posed by emerging trends and issues

**EVIDENCE** **GUIDE**

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

|  |  |
| --- | --- |
| 1. Critical Aspects of Competency | Assessment requires evidence that the candidate:   * 1. Identified and controlled security threats   2. Detected and protected computer crimes   3. Applied word processing in office tasks   4. Designed, prepared work sheet and applied data to the cells in accordance to workplace procedures   5. Opened electronic mail for office communication as per workplace procedure   6. Installed internet and World Wide Web for office tasks in accordance with office procedures   7. Integrated emerging issues in computer ICT applications   8. Applied laws governing protection of ICT |
| 1. Resource Implications | The following resources should be provided:   * 1. Access to relevant workplace where assessment can take place   2. Appropriately simulated environment where assessment can take place |
| 1. Methods of Assessment | Competency may be assessed through:   * 1. Observation   2. Oral questioning   3. Written test   4. Portfolio of Evidence   5. Interview   6. Third party report |
| 1. Context of Assessment | Competency may be assessed:   1. On-the-job 2. Off-the –job 3. During Industrial attachment |
| 1. Guidance information for assessment | Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. |

**DEMONSTRATE ENTREPRENEURIAL SKILLS**

**UNIT CODE :** DM/OS/FIR/BC/04/6/A

**UNIT DESCRIPTION**

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

**ELEMENTS AND PERFORMANCE CRITERIA**

|  |  |
| --- | --- |
| **ELEMENT** | **PERFORMANCE CRITERIA** |
| 1. Demonstrate understanding of an Entrepreneur | 1. Entrepreneurs and Business persons are distinguished as per principles of entrepreneurship 2. ***Types of entrepreneurs*** are identified as per principles of entrepreneurship 3. Ways of becoming an Entrepreneur are identified as per principles of Entrepreneurship 4. ***Characteristics of Entrepreneurs*** are identified as per principles of Entrepreneurship 5. Factors affecting Entrepreneurship development are explored as per principles of Entrepreneurship |
| 1. Demonstrate understanding of Entrepreneurship and self-employment | 1. Entrepreneurship and self-employment are distinguished as per principles of entrepreneurship 2. Importance of self-employment is analysed based on business procedures and strategies 3. ***Requirements for entry into self-employment*** are identified according to business procedures and strategies 4. Role of an Entrepreneur in business is determined according to business procedures and strategies 5. Contributions of Entrepreneurs to National development are identified as per business procedures and strategies 6. Entrepreneurship culture in Kenya is explored as per business procedures and strategies 7. Born or made Entrepreneurs are distinguished as per entrepreneurial traits |
| 1. Identify Entrepreneurship opportunities | 1. Sources of business ideas are identified as per business procedures and strategies 2. Business ideas and opportunities are generated as per business procedures and strategies 3. Business life cycle is analysed as per business procedures and strategies 4. Legal aspects of business are identified as per procedures and strategies 5. Product demand is assessed as per market strategies 6. Types of ***business environment*** are identified and evaluated as per business procedures 7. Factors to consider when evaluating business environment are explored based on business procedure and strategies 8. Technology in business is incorporated as per best practice |
| 1. Create entrepreneurial awareness | 1. ***Forms of businesses*** are explored as per business procedures and strategies 2. Sources of business finance are identified as per business procedures and strategies 3. Factors in selecting source of business finance are identified as per business procedures and strategies 4. ***Governing policies*** on Small Scale Enterprises (SSEs) are determined as per business procedures and strategies 5. Problems of starting and operating SSEs are explored as per business procedures and strategies |
| 1. Apply entrepreneurial motivation | 1. ***Internal and external motivation*** factors are determined in accordance with motivational theories 2. Self-assessment is carried out as per entrepreneurial orientation 3. Effective communications are carried out in accordance with communication principles 4. Entrepreneurial motivation is applied as per motivational theories |
| 1. Develop innovative business strategies | 1. Business innovation strategies are determined in accordance with the organization strategies 2. Creativity in business development is demonstrated in accordance with business strategies 3. ***Innovative business strategies*** are developed as per business principles 4. Linkages with other entrepreneurs are created as per best practice 5. ICT is incorporated in business growth and development as per best practice |
| 1. Develop Business Plan | 1. Identified Business is described as per business procedures and strategies 2. Marketing plan is developed as per business plan format 3. Organizational/Management plan is prepared in accordance with business plan format 4. Production/operation plan in accordance with business plan format 5. Financial plan is prepared in accordance with the business plan format 6. Executive summary is prepared in accordance with business plan format 7. Business plan is presented as per best practice |

**RANGE**

This section provides work environment and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

|  |  |
| --- | --- |
| **Variable** | **Range** |
| 1. Types of entrepreneurs may include but not limited to: | * Innovators * Imitators * Craft * Opportunistic * Speculators |
| 1. Characteristics of Entrepreneurs may include but not limited to: | * Creative * Innovative * Planner * Risk taker * Networker * Confident * Flexible * Persistent * Patient * Independent * Future oriented * Goal oriented |
| 1. Requirements for entry into self-employment may include but not limited to | * Technical skills * Management skills * Entrepreneurial skills * Resources * Infrastructure |
| 1. Internal and external motivation may include but not limited to: | * Interest * Passion * Freedom * Prestige * Rewards * Punishment * Enabling environment * Government policies |
| 1. Business environment may include but not limited to: | * External * Internal * Intermediate |
| 1. Forms of businesses may include but not limited to: | * Sole proprietorship * Partnership * Limited companies * Cooperatives |
| 1. Governing policies may include but not limited to: | * Increasing scope for finance * Promoting cooperation between entrepreneurs and private sector * Reducing regulatory burden on entrepreneurs * Developing IT tools for entrepreneurs |
| 1. Innovative business strategies may include but not limited to: | * New products * New methods of production * New markets * New sources of supplies * Change in industrialization |

**REQUIRED SKILLS AND KNOWLEDGE**

This section describes the skills and knowledge required for this unit of competency.

**Required Skills**

The individual needs to demonstrate the following skills:

* Analytical
* Management
* Problem-solving
* Root-cause analysis
* Communication

**Required Knowledge**

The individual needs to demonstrate knowledge of:

* Decision making
* Business communication
* Change management
* Competition
* Risk
* Net working
* Time management
* Leadership
* Factors affecting entrepreneurship development
* Principles of Entrepreneurship
* Features and benefits of common operational practices, e. g., continuous improvement (kaizen), waste elimination,
* Conflict resolution
* Health, safety and environment (HSE) principles and requirements
* Customer care strategies
* Basic financial management
* Business strategic planning
* Impact of change on individuals, groups and industries
* Government and regulatory processes
* Local and international market trends
* Product promotion strategies
* Market and feasibility studies
* Government and regulatory processes
* Local and international business environment
* Relevant developments in other industries
* Regional/ County business expansion strategies

**EVIDENCE GUIDE**

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

|  |  |
| --- | --- |
| 1. Critical Aspects of Competency | 1. Assessment requires evidence that the candidate: 2. Distinguished entrepreneurs and businesspersons correctly 3. Identified ways of becoming an entrepreneur appropriately 4. Explored factors affecting entrepreneurship development appropriately 5. Analysed importance of self-employment accurately 6. Identified requirements for entry into self-employment correctly 7. Identified sources of business ideas correctly 8. GeneratedBusiness ideas and opportunities correctly 9. Analysed business life cycle accurately 10. Identified legal aspects of business correctly 11. Assessed product demand accurately 12. Determined Internal and external motivation factors appropriately 13. Carried out communications effectively 14. Identified sources of business finance correctly 15. Determined Governing policy on small scale enterprise appropriately 16. Explored problems of starting and operating SSEs effectively 17. Developed Marketing, Organizational/Management, Production/Operation and Financial plans correctly 18. Prepared executive summary correctly 19. Determined business innovative strategies appropriately 20. Presented business plan effectively |
| 1. Resource Implications | The following resources should be provided:   1. Access to relevant workplace where assessment can take place 2. Appropriately simulated environment where assessment can take place |
| 1. Methods of Assessment | 1. Written tests 2. Oral questions 3. Third party report 4. Interviews 5. Portfolio of Evidence |
| 1. Context of Assessment | Competency may be assessed   1. On-the-job 2. Off-the –job 3. During Industrial attachment |
| 1. Guidance information for assessment | Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. |

# DEMONSTRATE EMPLOYABILITY SKILLS

**UNIT CODE:** DM/OS/FIR/BC/05/6/A

**UNIT DESCRIPTON**

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 ethical performance.

**ELEMENTS AND PERFORMANCE CRITERIA**

|  |  |
| --- | --- |
| **ELEMENT**  These describe the key outcomes which make up workplace function. | **PERFORMANCE CRITERIA**  These are assessable statements which specify the required level of performance for each of the elements.  ***Bold and italicized terms are elaborated in the Range*** |
| 1. Conduct self-management | 1. Personal vision, mission and goals are formulated based on potential and in relation to organization objectives 2. Emotional intelligence is demonstrated as per workplace requirements. 3. Individual performance is evaluated and monitored according to the agreed targets. 4. Assertiveness is developed and maintained based on the requirements of the job. 5. Accountability and responsibility for own actions are demonstrated based on workplace instructions. 6. Self-esteem and a positive self-image are developed and maintained based on values. 7. Time management, attendance and punctuality are observed as per the organization policy. 8. Goals are managed as per the organization’s objective 9. Self-strengths and weaknesses are identified based on personal objectives |
| 1. Demonstrate interpersonal communication | 1. Writing skills are demonstrated as per communication policy 2. Negotiation and persuasion skills are demonstrated as per communication policy 3. Internal and external stakeholders’ needs are identified and interpreted as per the communication policy 4. Communication networks are established based on workplace policy 5. Information is shared as per communication policy |
| 1. Demonstrate critical safe work habits | * 1. Stress is managed in accordance with workplace policy.   2. Punctuality and time consciousness is demonstrated in line with workplace policy.   3. Personal objectives are integrated with organization goals based on organization’s strategic plan.   4. ***Resources*** are utilized in accordance with workplace policy.   5. Work priorities are set in accordance to workplace goals and objectives.   6. Leisure time is recognized and utilized in line with personal objectives.   7. ***Drugs and substances of abuse*** are identified and avoided based on workplace policy.   8. HIV and AIDS prevention awareness is demonstrated in line with workplace policy.   9. Safety consciousness is demonstrated in the workplace based on organization safety policy.   10. ***Emerging issues*** are identified and dealt with in accordance with organization policy. |
| 1. Lead a workplace team | 1. Performance targets for the ***team*** are set based on organization’s objectives 2. Duties are assigned in accordance with the organization policy. 3. ***Forms of communication*** in a team are established according to organization’s policy. 4. Team performance is evaluated based on set targets as per workplace policy. 5. Conflicts are resolved between team members in line with organization policy. 6. Gender related issues are identified and mainstreamed in accordance workplace policy. 7. Human rights and fundamental freedoms are identified and respected as Constitution of Kenya 2010. 8. Healthy relationships are developed and maintained in line with workplace. |
| 1. Plan and organize work | 1. Work plans are prepared based on activities and budget. 2. Assigned tasks are interpreted and expectations identified as per the workplace instructions. 3. Task occupational safety and health requirements are identified and observed regulations. 4. Work resources are identified, mobilized, allocated and utilized based on organization work plans. 5. Work activities are monitored and evaluated in line with work plans and workplace policy. 6. Work plans are reviewed based on target and available resources. |
| 1. Maintain professional growth and development | * 1. Personal training needs are identified and assessed in line with the requirements of the job.   2. ***Training and career opportunities*** are identified and utilized based on job requirements.   3. Resources for training are mobilized and allocated based organizations and individual skills needs.   4. Licensees and certifications relevant to job and career are obtained and renewed as per policy.   5. Work priorities and personal commitments are balanced and managed based on requirements of the job and personal objectives.   6. Recognitions are sought as proof of career advancement in line with professional requirements. |
| 1. Demonstrate workplace learning | * 1. Learning opportunities are sought and managed based on job requirement and organization policy.   2. Improvement in performance is demonstrated based on courses attended.   3. Application of learning is demonstrated in both technical and non-technical aspects based on requirements of the job   4. Time and effort is invested in learning new skills based on job requirements   5. Initiative is taken to create more effective and efficient processes and procedures in line with workplace policy.   6. New systems are developed and maintained in accordance with the requirements of the job.   7. Awareness of personal role in workplace ***innovation*** is demonstrated based on requirements of the job. |
| 1. Demonstrate problem solving skills | * 1. Creative, innovative and practical solutions are developed based on the problem   2. Independence and initiative in identifying and solving problems is demonstrated based on requirements of the job.   3. Team problems are solved as per the workplace guidelines   4. Problem solving strategies are applied as per the workplace guidelines   5. Problems are analyzed and assumptions tested as per the context of data and circumstances |
| 1. Manage ethical performance | * 1. Policies and guidelines are observed as per the workplace requirements   2. Self-worth and professionalism is exercised in line with personal goals and organizational policies   3. Code of conduct is observed as per the workplace requirements   4. Integrity is demonstrated as per legal requirement |

**RANGE**

This section provides work environment and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

|  |  |
| --- | --- |
| **Variable** | **Range** |
| 1. Drug and substance abuse may include but not limited to: | Commonly abused   * Alcohol * Tobacco * Miraa * Over-the-counter drugs * Cocaine * Bhang * Glue |
| 1. Feedback may include but not limited to: | * Verbal * Written * Informal * Formal |
| 1. Relationships may include but not limited to: | * Man/Woman * Trainer/trainee * Employee/employer * Client/service provider * Husband/wife * Boy/girl * Parent/child * Sibling relationships |
| 1. Forms of communication may include but not limited to: | * Written * Visual * Verbal * Non verbal * Formal and informal |
| 1. Team may include but not limited to: | * Small work group * Staff in a section/department * Inter-agency group |
| 1. Personal growth may include but not limited to: | * Growth in the job * Career mobility * Gains and exposure the job gives * Net workings * Benefits that accrue to the individual as a result of noteworthy performance |
| 1. Personal objectives may include but not limited to: | * Long term * Short term * Broad * Specific |
| 1. Trainings and career opportunities may includes but not limited to | * Participation in training programs * Serving as Resource Persons in conferences and workshops |
| 1. Resource may include may but not limited to: | * Human * Financial * Technology |
| 1. Innovation may include but not limited to: | * New ideas * Original ideas * Different ideas * Methods/procedures * Processes * New tools |
| 1. Emerging issues may include but not limited to: | * Terrorism * Social media * National cohesion * Open offices |
| 1. Range of media for learning may include but not limited to: | * Mentoring * peer support and networking * IT and courses |

**REQUIRED SKILLS AND KNOWLEDGE**

This section describes the skills and knowledge required for this unit of competency.

**Required Skills**

The individual needs to demonstrate the following skills:

* Interpersonal
* Communication
* Critical thinking
* Organizational
* Negotiation
* Monitoring
* Evaluation
* Record keeping
* Problem solving
* Decision Making
* Resource utilization
* Resource mobilization

**Required Knowledge**

The individual needs to demonstrate knowledge of:

* Work values and ethics
* Company policies
* Company operations, procedures and standards
* Occupational Health and safety procedures
* Fundamental rights at work
* Workplace communication
* Concept of time
* Time management
* Decision making
* Types of resources
* Work planning
* Organizing work
* Monitoring and evaluation
* Record keeping
* Gender mainstreaming
* HIV and AIDS
* Drug and substance abuse
* Professional growth and development
* Technology in the workplace
* Innovation
* Emerging issues

**EVIDENCE GUIDE**

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

|  |  |
| --- | --- |
| 1. Critical aspects of Competency | Assessment requires evidence that the candidate:   * 1. Conducted self-management   2. Demonstrated interpersonal communication   3. Demonstrated critical safe work habits   4. Demonstrated the ability to lead a workplace team   5. Planned and organized work   6. Maintained professional growth and development   7. Demonstrated workplace learning   8. Demonstrated problem solving skills   9. Demonstrated the ability to manage performance ethically |
| 1. Resource Implications | The following resources should be provided:   1. Access to relevant workplace where assessment can take place 2. Appropriately simulated environment where assessment can take place |
| 1. Methods of Assessment | Competency in this unit may be assessed through:   1. Observation 2. Oral questioning 3. Written test 4. Portfolio of Evidence 5. Interview 6. Third party report |
| 1. Context of Assessment | Competency may be assessed:   1. On-the-job 2. Off-the –job 3. During Industrial attachment |
| 1. Guidance information for assessment | | Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. |

# DEMONSTRATE ENVIRONMENTAL LITERACY

**UNIT CODE:** DM/OS/FIR/BC/06/6/A

**UNIT DESCRIPTION**

This unit specifies the competencies required to demonstrate environmental literacy. It involves, controlling environmental hazard and environmental pollution, demonstrating sustainable resource use, evaluating current practices in relation to resource usage, identifying environmental legislations/conventions for environmental concerns, implementing specific environmental programs, monitoring activities on environmental protection/Programs , analyzing resource use and developing resource conservation plans.

**ELEMENTS AND PERFORMANCE CRITERIA**

|  |  |
| --- | --- |
| **ELEMENT**  These describe the key outcomes which make up workplace function. | **PERFORMANCE CRITERIA**  These are assessable statements which specify the required level of performance for each of the elements.  ***Bold and italicized terms are elaborated in the Range*** |
| 1. Control environmental hazard | 1. Storage methods for environmentally hazardous materials are strictly followed according to environmental regulations and OSHS. 2. Disposal methods of hazardous wastes are followed according to environmental regulations and OSHS. 3. ***PPE*** is used according to OSHS. |
| 1. Control environmental Pollution | * 1. Environmental pollution ***control measures*** are implemented in accordance with international protocols.   2. Procedures for solid waste management are observed according Environmental Management and Coordination Act 1999   3. Methods for minimizing noise pollution is complied with based on Noise and Excessive Vibration Pollution and Control Regulations, 2009 |
| 1. Demonstrate sustainable resource use | * 1. Methods for minimizing wastage are complied with based on organizational waste management guide   2. Waste management procedures are employed following principles of 3Rs (Reduce, Reuse, Recycle)   3. Methods for economizing and reducing resource consumption are practiced as per the Constitution of Kenya 2010 Article 69 . |
| 1. Evaluate current practices in relation to resource usage | * 1. Information on resource efficiency systems and procedures are collected and provided as per work groups/sector   2. Current resource usage is measured and recorded as per work group   3. Current purchasing strategies are analysed and recorded according to industry procedures.   4. Current work processes to access information and data is analysed following enterprise protocol. |
| 1. Identify environmental legislations/conventions for environmental concerns | 1. Environmental legislations/conventions and local ordinances are identified according to the different environmental aspects/impact 2. Industrial standard/environmental practices are described according to the different environmental concerns |
| 1. Implement specific environmental programs | 1. Programs/Activities are identified according to organizations policies and guidelines. 2. Individual roles/responsibilities are determined and performed based on the activities identified. 3. Problems/constraints encountered are resolved in accordance with organizations’ policies and guidelines 4. Stakeholders are consulted based on company guidelines |
| 1. Monitor activities on Environmental protection/Programs | 1. Activities are periodically monitored and Evaluated according to the objectives of the environmental program 2. Feedback from stakeholders is gathered and considered in Proposing enhancements to the program based on consultations 3. Data gathered are analyzed based on Evaluation requirements 4. Recommendations are submitted based on the findings 5. Management support systems are set/established to sustain and enhance the program 6. Environmental incidents are monitored and reported to 7. concerned/proper authorities |
| 1. Analyse resource use | 1. All resource consuming processes are Identified as per the organizational work plan 2. Quantity and nature of resource consumed is determined based on processes 3. Resource flow is analysed as per different parts of the process. 4. Wastes are classified according to NEMA regulations on waste management. |
| 1. Develop resource Conservation plans | 9.1. Efficiency of use/conversion of resources is determined according to industry protocol.  9.2. Causes of low efficiency of use of resources are Determined based on industry protocol.  9.3. Plans for increasing the efficiency of resource use are developed based on findings. |

**RANGE**

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

|  |  |
| --- | --- |
| **Variable** | **Range** |
| 1. PPE may include but not limited to | * + Mask   + Gloves   + Goggles   + Safety hat   + Overall * Hearing protector |
| 1. Control measures may include but not limited to | * Methods for minimizing or stopping spread and ingestion of airborne particles * Methods for minimizing or stopping spread and ingestion of gases and fumes * Methods for minimizing or stopping spread and ingestion of liquid wastes |

**REQUIRED SKILLS AND KNOWLEDGE**

This section describes the skills and knowledge required for this unit of competency.

**Required Skills**

The individual needs to demonstrate the following skills:

* Measuring
* Recording
* Analytical
* Monitoring
* Communication
* Writing

**Required Knowledge**

The individual needs to demonstrate knowledge of:

* PPEs
* Environmental regulations
* OSHS
* Pollution
* Waste management
* Principle of 3Rs
* Types of resources
* Techniques in measuring current usage of resources
* Environmental hazards
* Regulatory requirements

**EVIDENCE GUIDE**

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

|  |  |
| --- | --- |
| 1. Critical Aspects of Competency | Assessment requires evidence that the candidate:   * 1. Controlled environmental hazard   2. Controlled environmental pollution   3. Demonstrated sustainable resource use   4. Evaluated current practices in relation to resource usage   5. Demonstrated knowledge of environmental legislations and local ordinances according to the different environmental issues /concerns.   6. Described industrial standard environmental practices according to the different environmental issues/concerns.   7. Resolved problems/ constraints encountered based on management standard procedures   8. Implemented and monitored environmental practices on a periodic basis as per company guidelines   9. Recommended solutions for the improvement of the program   10. Monitored and reported to proper authorities any environmental incidents |
| 1. Resource Implications | The following resources should be provided:   * 1. Workplace with storage facilities   2. Tools, materials and equipment relevant to the tasks (e.g. Cleaning tools, cleaning materials, trash bags)   3. PPE, manuals and references   4. Legislation, policies, procedures, protocols and local ordinances relating to environmental protection   5. Case studies/scenarios relating to environmental Protection |
| 1. Methods of Assessment | Competency in this unit may be assessed through:   * 1. Observation   2. Oral questioning   3. Written test   4. Portfolio of Evidence   5. Interview   6. Third party report |
| 1. Context of Assessment | Competency may be assessed   1. On-the-job 2. Off-the –job 3. During Industrial attachment |
| 1. Guidance information for assessment | Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. |

# DEMONSTRATE OCCUPATIONAL SAFETY AND HEALTH PRACTICES

**UNIT CODE:** DM/OS/FIR/BC/07/6/A

**UNIT DESCRIPTION**

This unit specifies the competencies required to demonstrate occupational health and safety practices. It involves identifying workplace hazards and risks, identifying and implementing appropriate control measures to hazards and risks and implementing OSH programs, procedures and policies/guidelines.

**ELEMENTS AND PERFORMANCE CRITERIA**

|  |  |
| --- | --- |
| **ELEMENT**  These describe the key outcomes which make up workplace function. | **PERFORMANCE CRITERIA**  These are assessable statements which specify the required level of performance for each of the elements.  ***Bold and italicized terms are elaborated in the Range*** |
| 1. Identify workplace hazards and risk | 1.1 ***Hazards*** in the workplace are identified ***based their indicators***  1.2 Risks and hazards are evaluated based on legal requirements.  1.3 ***OSH concerns*** raised by workers are addressed as per legal requirements. |
| 1. Control OSH hazards | 2.1 Hazard prevention ***and control measures*** are implemented as per legal requirement.  2.2 Risk assessment is conductedand a risk matrix developed based on likely impact.  2.3 ***Contingency measures***, including ***emergency procedures*** during workplace ***incidents and emergencies*** are recognized and established in accordance with organization procedures. |
| 1. Implement OSH programs | 3.1 Company OSH program are identified, evaluated and reviewed based on legal requirements.  3.2 Company OSH programs are implemented as per legal requirements.  3.3 Workers are capacity built on OSH standards and procedures as per legal requirements  3.4 ***OSH-related records*** are maintained as per legal requirements. |

**RANGE**

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

|  |  |
| --- | --- |
| **Variable** | **Range** |
| 1. Hazards may include but not limited to: | * Physical hazards – impact, illumination, pressure, noise, * vibration, extreme temperature, radiation * Biological hazards- bacteria, viruses, plants, parasites, mites, molds, fungi, insects * Chemical hazards – dusts, fibers, mists, fumes, smoke, gasses, vapors * Ergonomics * Psychological factors – over exertion/ excessive force,   awkward/static positions, fatigue, direct pressure,   * varying metabolic cycles * Physiological factors – monotony, personal relationship, work out cycle * Safety hazards (unsafe workplace condition) –confined space, excavations, falling objects, gas leaks, electrical, poor storage of materials and waste, spillage, waste and debris * Unsafe workers’ act (Smoking in off-limited areas, Substance and alcohol abuse at work) |
| 1. Indicators may include but not limited to: | * Increased of incidents of accidents, injuries * Increased occurrence of sickness or health complaints/ symptoms * Common complaints of workers related to OSH * High absenteeism for work-related reasons |
| 1. OSH concerns may include but not limited to: | * Workers’ experience/observance on presence of work hazards * Unsafe/unhealthy administrative arrangements (prolonged work hours, no break time, constant overtime, scheduling of tasks) * Reasons for compliance/non-compliance to use of PPEs or other OSH procedures/policies/guidelines |
| 1. Safety gears /PPE (Personal Protective Equipment) may include but not limited to: | * 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 |
| 1. Appropriate risk controls may include but not limited to: | * Appropriate risk controls in order of impact are as follows: * Eliminate the hazard altogether (i.e., get rid of the dangerous machine) * Isolate the hazard from anyone who could be harmed (i.e., keep the machine in a closed room and operate it remotely; barricade an unsafe area off) * Substitute the hazard with a safer alternative (i.e., replace the machine with a safer one) * Use administrative controls to reduce the risk (i.e., train workers how to use equipment safely; train workers about the risks of harassment; issue signage) * Use engineering controls to reduce the risk (i.e., attach guards to the machine to protect users) * Use personal protective equipment (i.e., wear * gloves and goggles when using the machine) |
| 1. Contingency measures may include but not limited to: | * Evacuation * Isolation * Decontamination * (Calling designed) emergency personnel |
| 1. Incidents and emergencies may include but not limited to: | * Chemical spills * Equipment/vehicle accidents * Explosion * Fire * Gas leak * Injury to personnel * Structural collapse * Toxic and/or flammable vapors emission. |
| 1. OSH-related Records may include but not limited to: | * Medical/Health records * Incident/accident reports * Sickness notifications/sick leave application * OSH-related trainings obtained |

**REQUIRED SKILLS AND KNOWLEDGE**

This section describes the skills and knowledge required for this unit of competency.

**Required Skills**

The individual needs to demonstrate the following skills:

* Communication
* Interpersonal
* Presentation
* Risk assessment
* Evaluation
* Critical thinking
* Problem solving
* Negotiation

**Required Knowledge**

The individual needs to demonstrate knowledge of:

* General OSH Principles
* Occupational hazards/risks recognition
* OSH organizations providing services on OSH evaluation and/or work environment measurements (WEM)
* National OSH regulations; company OSH policies and protocols
* Systematic gathering of OSH issues and concerns
* General OSH principles
* National OSH regulations
* Company OSH and recording protocols, procedures and policies/guidelines
* Training and/or counseling methodologies and strategies

**EVIDENCE GUIDE**

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

|  |  |
| --- | --- |
| 1. Critical Aspects of Competency | Assessment requires evidence that the candidate:   1. Identified hazards in the workplace based their indicators 2. Evaluated workplace hazards based on legal requirements. 3. Addressed OSH concerns raised by workers as per legal requirements. 4. Implemented hazard prevention and control measures as per legal requirement. 5. Conducted risk assessment as per legal requirement. 6. Developed risk matrix based on likely impact. 7. Recognized and established contingency measures in accordance with organization procedures. 8. Identified, evaluated and reviewed company OSH program based on legal requirements. 9. Implemented company OSH programs as per legal requirements. 10. Capacity built workers on OSH standards and procedures as per legal requirements 11. Maintained OSH-related records as per legal requirements. |
| 1. Resource Implications | The following resources should be provided:   1. Access to relevant workplace where assessment can take place 2. Appropriately simulated environment where assessment can take place |
| 1. Methods of Assessment | Competency in this unit may be assessed through:   1. Observation 2. Oral questioning 3. Written test 4. Portfolio of Evidence 5. Interview 6. Third party report |
| 1. Context of Assessment | Competency may be assessed:   1. On-the-job 2. Off-the –job 3. During Industrial attachment |
| 1. Guidance information for assessment | Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. |

# COMMON UNIT

# MANAGE FIRE SERVICE

**UNIT CODE:** **DM/OS/FIR/CC/01/6/A**

**UNIT DESCRIPTION**

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

**ELEMENTS AND PERFORMANCE CRITERIA**

|  |  |
| --- | --- |
| **ELEMENT**  These describe the **key outcomes** which make up **workplace function**. | **PERFORMANCE CRITERIA**  These are **assessable** statements which specify the required level of performance for each of the elements.  ***Bold and italicized terms are elaborated in the range.*** |
| 1. Perform paramilitary function | * 1. Chain of command are identified as per the paramilitary regulation   2. Chain of command are adhered to as per paramilitary regulation   3. Standing orders are observed as per paramilitary regulation   4. Paramilitary parade is formed as per paramilitary regulation   5. ***Foot drills*** are conducted as per paramilitary regulation   6. Discipline is instilled as per paramilitary regulation   7. Personal grooming is maintained as per paramilitary regulation |
| 1. Manage emergency Incident operations | * 1. Nature of incident is determined as per the scene   2. Strategy for incident management is established as per the nature of incidence.   3. Duties are allocated as per the nature of incidence   4. Resources are allocated as per the nature of incidence   5. Scene is monitored as per the nature of incidence   6. Scene debrief is conducted as per incident details |

**RANGE**

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

|  |  |
| --- | --- |
| **Variable** | **Range** |
| 1. Foot drills includes but not limited to: | * + Marching   + Saluting |

**REQUIRED KNOWLEDGE AND UNDERSTANDING**

The individual needs to demonstrate knowledge of:

**KNOWLEDGE**

* Conflict resolution
* Paramilitary guidelines
* Paramilitary command system
* Incident management systems

**SKILLS**

The individual needs to demonstrate the following skills:

* Leadership
* Communication
* Interpersonal
* Problem solving
* Management

**EVIDENCE GUIDE**

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

|  |  |
| --- | --- |
| 1. Critical Aspects of Competency | Assessment requires evidence that the candidate: demonstrated ability to:   1. Knowledge on chain of command 2. Adhere to the chain of command 3. Observe standing orders 4. Fall into paramilitary parade formation 5. Conduct foot drills are 6. Maintain personal grooming 7. Determine nature of incident 8. Establish strategy for incident management 9. Allocated duties 10. Allocate resources 11. Monitor scene |
| 1. Resource Implications | The following resources must be provided:   * 1. Communication equipment   2. Stationery   3. Computers |
| 1. Methods of Assessment | Competency may be accessed through:   1. Written tests 2. Oral questioning 3. Third party reports 4. Case studies |
| 1. Context of Assessment | Competency may be assessed:   1. On the job 2. Off the job 3. In work placement (attachment) 4. Off the job assessment must be undertaken in a closely simulated workplace environment |
| 1. Guidance information for assessment | Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. |

# CORE UNITS

# FIGHT FIRE OUTBREAK

**UNIT CODE:** DM/OS/FIR/CR/01/6/A

**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 firefighter self-safety, saving life of victims, conducting property salvage and conducting fire investigation.

**ELEMENTS AND PERFORMANCE CRITERIA**

|  |  |
| --- | --- |
| **ELEMENT**  These describe the **key outcomes** which make up **workplace function**. | **PERFORMANCE CRITERIA**  These are **assessable** statements which specify the required level of performance for each of the elements.  ***Bold and italicized terms are elaborated in the range.*** |
| 1. Determine type of fire | 1. Fire incidents are identified as per fire alarms or calls. 2. Fire magnitude is determined as per the nature of the incident. 3. Quantity of ***fire load*** is determined as per the nature of fire. 4. Incident is monitored as per the nature of scene |
| 1. Determine firefighting medium | * 1. ***Fire class*** is identified as per the type of fuel   2. ***Method of fire*** extinction is determined as per the nature of fire   3. ***Medium of fire extinction*** are applied as per the type of fire |
| 1. Obtain firefighting equipment | * 1. Availability of firefighting equipment is established as per standard operating procedures.   2. Functionality of firefighting equipment is checked as per standard operating procedures.   3. Report on status of firefighting equipment is established as per standard operating procedures. |
| 1. Manage firefighter self-safety | * 1. Fire scene safety is assessed as per the nature of fire scene   2. Applicability of PPEs is verified as per the nature of the fire.   3. Safe system of work is established as per standard operating procedures.   4. Changes within fire progression are observed as per the nature of the fire. |
| 1. Save life of victims | * 1. Nature of incidents is determined as per the fire scene   2. Safety of victim is established as per the nature of incidence   3. Victims are evacuated as per safety measures |
| 1. Conduct property Salvage | * 1. Fire is managed as per standard operating procedures   2. Property is conserved as per safety precaution   3. Conserved property is handed over as per organization procedures. |

**RANGE**

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

|  |  |
| --- | --- |
| **Variable** | **Range** |
| 1. fire load includes but not limited to: | * + Liquid   + Gas   + Solid |
| 1. Fire class includes but not limited to: | * + A-solid organic material   + B- flammable liquids   + C- flammable gas   + D- combustible metals   + F- cooking oils and fats |
| 1. Method of fire extinction includes but not limited to: | * + Chemical chain reaction interruptions   + Smothering   + Starvation   + Cooling |

**REQUIRED KNOWLEDGE AND UNDERSTANDING**

The individual needs to demonstrate knowledge of:

**KNOWLEDGE**

* Fire
* Fire chemistry
* Fire equipment
* Methods of fire suppression

**SKILLS**

The individual needs to demonstrate the following skills:

* Time management
* Fire equipment handling
* Communication
* Leadership

**EVIDENCE GUIDE**

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

|  |  |
| --- | --- |
| 1. Critical Aspects of Competency | Assessment requires evidence that the candidate:   1. Determined type of fire 2. Established availability of firefighting equipment 3. Tested functionality of firefighting equipment 4. Managed firefighter self-safety 5. Save life of victims 6. Conserved property |
| 1. Resource Implications | The following resources must be provided:   * 1. PPES   2. Communication equipment   3. Fire engine   4. Portable pumps   5. Water sources |
| 1. Methods of Assessment | Competency may be accessed through:   * 1. Written tests   2. Oral questioning   3. Third party reports   4. Case studies   5. Observation |
| 1. Context of Assessment | Competency may be assessed:   1. On the job 2. Off the job 3. In work placement (attachment) 4. Off the job assessment must be undertaken in a closely simulated workplace environment |
| 1. Guidance information for assessment | Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. |

# PREVENT FIRE OUTBREAK

**UNIT CODE:** **DM/OS/FIR/CR/02/6/A**

**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 scrutinizing development plan.

**ELEMENTS AND PERFORMANCE CRITERIA**

|  |  |
| --- | --- |
| **ELEMENT**  These describe the **key outcomes** which make up **workplace function**. | **PERFORMANCE CRITERIA**  These are **assessable** statements which specify the required level of performance for each of the elements.  ***Bold and italicized terms are elaborated in the range.*** |
| 1. Conduct fire risk assessment | 1. Facility operations are identified as per occupational safety and health standards 2. Risks are identified as per the type of facility operation 3. Hazards are identified as per the occupational safety and health standards 4. Fire risk assessment report is prepared as per occupational safety and health standards. 5. Implementation of recommendations is checked as per the report. |
| 1. Sensitize community on fire risk | * 1. Area of topography is established as per organization policy   2. Target group is identified as per the nature of risk exposure   3. Sensitization programme is prepared as per target group   4. Sensitization report is prepared as per the organization policy |
| 1. Advise on fire suppression | * 1. Type of fire is identified as per the nature of incidence.   2. Fire alarm is raised as per standard operating procedures.   3. Fire brigade is contacted as per standard operating procedures.   4. ***Action*** is taken as per safety precautions.   5. Report is prepared as per the number of people in the assembly point. |
| 1. Scrutinize development plan | * 1. Intended usage of the building is established as per building code   2. Building materials are determined as per building code   3. Provision for establishment of portable fire extinguishers are determined as per building code   4. Provision for establishment of structural fire protection are determined as per building code   5. Provision for establishment of sufficient exit are determined as per building code |

**RANGE**

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

|  |  |
| --- | --- |
| **Variable** | **Range** |
| 1. Action   includes but not limited to: | * + Fight fire   + Evacuate |

**REQUIRED KNOWLEDGE AND UNDERSTANDING**

The individual needs to demonstrate knowledge of:

**KNOWLEDGE**

* Legislations on fire prevention
* Building codes
* Physical planning Act
* Occupation safety and health Act

**SKILLS**

The individual needs to demonstrate the following skills:

* Teaching
* Firefighting

**EVIDENCE GUIDE**

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

|  |  |
| --- | --- |
| 1. Critical Aspects of Competency | Assessment requires evidence that the candidate:   1. Conducted fire risk assessment 2. Sensitized community on fire risk 3. Advised on fire suppression 4. Scrutinized development plan |
| 1. Resource Implications | The following resources must be provided:   * 1. Stationery   2. Extinguishers |
| 1. Methods of Assessment | Competency may be accessed through:   * 1. Written tests   2. Oral questioning   3. Third party reports   4. Case studies  1. Observation |
| 1. Context of Assessment | Competency may be assessed:   1. On the job 2. Off the job 3. In work placement (attachment) 4. Off the job assessment must be undertaken in a closely simulated workplace environment |
| 1. Guidance information for assessment | Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. |

# MAINTAIN FIREFIGHTING RESOURCES

**UNIT CODE:** **DM/OS/FIR/CR/03/6/A**

**UNIT DESCRIPTION**

This unit specifies the competencies required to maintain firefighting resources. It involves managing usage of firefighting equipment, cleaning firefighting equipment, repairing firefighting equipment and storing firefighting equipment.

**ELEMENTS AND PERFORMANCE CRITERIA**

|  |  |
| --- | --- |
| **ELEMENT**  These describe the **key outcomes** which make up **workplace function**. | **PERFORMANCE CRITERIA**  These are **assessable** statements which specify the required level of performance for each of the elements.  ***Bold and italicized terms are elaborated in the range.*** |
| 1. Manage usage of firefighting equipment | 1. ***Firefighting equipment*** is identified as per the work purpose. 2. Firefighting equipment is applied as per manufacturers’ guidelines. 3. Safe usage of equipment is certified as per standard operating procedures. |
| 1. Clean firefighting equipment | * 1. Firefighting equipment are identified as per cleaning needs   2. Cleaning resources are assembled as per work place procedures.   3. Firefighting equipment is dismantled as per manufactures guidelines.   4. Firefighting equipment is dried as per manufactures guidelines.   5. Firefighting equipment is reassembled as per manufactures guidelines. |
| 1. Repair firefighting equipment | * 1. Equipment faults are identified as per work place procedures   2. Repair parts are sourced as per work place procedures   3. Faulty parts are fixed as per manufacturers guidelines |
| 1. Store firefighting equipment | * 1. Record of equipment inventory is taken as per work place procedures   2. Firefighting equipment are classified as per work place procedures   3. Safety of equipment is ensured as per work place procedures |

**RANGE**

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

|  |  |
| --- | --- |
| **Variable** | **Range** |
| 1. Firefighting equipment includes but not limited to: | * + Delivery hoses   + Pumps   + Hose reels   + Fire horse binding machine |

**REQUIRED KNOWLEDGE AND UNDERSTANDING**

The individual needs to demonstrate knowledge of:

**KNOWLEDGE**

* Firefighting resources
* Maintenance guidelines
* Service SOPs
* Communication
* Storage

**SKILLS**

The individual needs to demonstrate the following skills:

* Handling firefighting equipment
* Maintenance
* Repair
* Documentation

**EVIDENCE GUIDE**

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

|  |  |
| --- | --- |
| 1. Critical Aspects of Competency | Assessment requires evidence that the candidate:   1. Managed usage of firefighting equipment 2. Assembled cleaning agents 3. Dismantled firefighting equipment 4. Cleaned firefighting equipment 5. Identified faulty equipment 6. Assembled repair tools 7. Repaired firefighting equipment 8. Stored firefighting equipment 9. Demonstrated the ability to take inventory of firefighting tools |
| 1. Resource Implications | The following resources must be provided:   * 1. Stationery   2. Computer   3. Occurrence book   4. Firefighting tool and equipment   5. Maintenance tools |
| 1. Methods of Assessment | Competency may be accessed through:   * 1. Written tests   2. Oral questioning   3. Third party reports   4. Case studies   5. Observation |
| 1. Context of Assessment | Competency may be assessed:   1. On the job 2. Off the job 3. In work placement (attachment) 4. Off the job assessment must be undertaken in a closely simulated workplace environment |
| 1. Guidance information for assessment | Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. |

# CONDUCT SEARCH AND RESCUE

**UNIT CODE:** **DM/OS/FIR/CR/04/6/A**

**UNIT DESCRIPTION**

This unit specifies the competencies required to conduct search and rescue. It involves determining search and rescue equipment, determining safety of search and rescue, establishing search and rescue procedures and preparing rescue and search report.

**ELEMENTS AND PERFORMANCE CRITERIA**

|  |  |
| --- | --- |
| **ELEMENT**  These describe the **key outcomes** which make up **workplace function**. | **PERFORMANCE CRITERIA**  These are **assessable** statements which specify the required level of performance for each of the elements.  ***Bold and italicized terms are elaborated in the range.*** |
| 1. Determine search and rescue equipment | 1. Nature of incidence is determined as per call details. 2. Search and rescue equipment are transported as per work place procedures. 3. Search and rescue equipment are assembled as per standard operating procedures. 4. Search and rescue equipment are allocated as per specific use. |
| 1. Determine safety of search and rescue | * 1. Scene size up is conducted as per standard operating procedures.   2. Scene is condoned as per the nature of the incidence.   3. Scene and victims are ***secured*** as per standard operating procedures. |
| 1. Establish search and rescue procedures | * 1. Nature of operation is determined as per the scene   2. Search and rescue team is paired as per standard operating procedures.   3. Search and rescue equipment are obtained as per standard operating procedures.   4. Duration of search and rescue for each team is set up as per the nature of incidents. |
| 1. Prepare rescue and search report | * 1. Search and rescue debrief is conducted as per the incident outcome.   2. Critical incident stress debriefing is conducted as per the work place procedures.   3. Search and rescue challenges are outlined as per the debrief.   4. Search and rescue recommendations are given as per debrief. |

**RANGE**

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

|  |  |
| --- | --- |
| **Variable** | **Range** |
| 1. Secured includes but not limited to: | * + stabilizing the victim   + Stabilizing the scene   + Eliminating other hazards |

**REQUIRED KNOWLEDGE AND UNDERSTANDING**

The individual needs to demonstrate knowledge of:

**KNOWLEDGE**

* Search and rescue procedures
* Methods of communication
* Breathing apparatus
* Search and rescue equipment
* First aid
* Scene condoning
* Scene safety
* PPEs
* Lifting and carrying methods

**SKILLS**

The individual needs to demonstrate the following skills:

* Communication
* Leadership
* Time management
* Equipment handling
* Analytical
* Swimming
* Tactical
* First aid
* Swimming scuba diving

**EVIDENCE GUIDE**

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

|  |  |
| --- | --- |
| 1. Critical Aspects of Competency | Assessment requires evidence that the candidate:  Demonstrated ability to:   1. Identify nature of incident 2. Perform scene size up 3. Establish scene safety 4. Establish search and rescue procedures 5. Monitor scene progression 6. Perform debrief |
| 1. Resource Implications | The following resources must be provided:   * 1. Communication equipment   2. PPEs   3. Self-contained breathing apparatus   4. Personal guideline   5. Rescue rope and accessories   6. Harness   7. Trauma kit   8. Dummies |
| 1. Methods of Assessment | Competency may be accessed through:   * 1. Written tests   2. Oral questioning   3. Third party reports   4. Case studies   5. Observation |
| 1. Context of Assessment | Competency may be assessed:   1. On the job 2. Off the job 3. In work placement (attachment) 4. Off the job assessment must be undertaken in a closely simulated workplace environment |
| 1. Guidance information for assessment | Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. |

# OFFER FIRST AID

**UNIT CODE:** **DM/OS/FIR/CR/05/6/A**

**UNIT DESCRIPTION**

This unit specifies the competencies required offer to first aid. It involves determining scene safety, offering basic life support services and conducting patient evacuation.

**ELEMENTS AND PERFORMANCE CRITERIA**

|  |  |
| --- | --- |
| **ELEMENT**  These describe the **key outcomes** which make up **workplace function**. | **PERFORMANCE CRITERIA**  These are **assessable** statements which specify the required level of performance for each of the elements.  ***Bold and italicized terms are elaborated in the range.*** |
| 1. Determine scene safety | 1. Scene size up is conducted as per the nature of the incident 2. Scene is condoned as per the nature of the incident 3. Casualty is secured as per standard operating procedures |
| 1. Offer life support services | * 1. ***Nature of incident*** is determined as per the standard operating procedures.   2. Casualty condition is managed as per the nature of incident.   3. Ambulance services are contacted as per standard operating procedures. |
| 1. Conduct casualty evacuation | * 1. Lifting and carrying method is determined as per the casualty condition.   2. Lifting and carrying equipment are determined as per the casualty condition.   3. Casualty is lifted and carried as per the safety precautions. |
| 1. Prepare incident report | * 1. Nature of incident is determined as per the scene   2. Casualty details are obtained as per work place procedures   3. Casualty condition is determined as the assessment   4. Intervention measures are given as per standard operating procedures. |

**RANGE**

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

|  |  |
| --- | --- |
| **Variable** | **Range** |
| 1. Nature of incidents includes but not limited to: | * + Trauma   + Medical |

**REQUIRED KNOWLEDGE AND UNDERSTANDING**

The individual needs to demonstrate knowledge of:

**KNOWLEDGE**

* First aid
* First aid procedures
* First aid equipment
* Methods of communication
* Emergency medical service protocols
* Ambulance services
* Methods of patient assessment

**SKILLS**

The individual needs to demonstrate the following skills:

* Communication
* Bleeding management
* Lifting and carrying
* Spine stabilization
* Patient assessment

**EVIDENCE GUIDE**

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

|  |  |
| --- | --- |
| 1. Critical Aspects of Competency | Assessment requires evidence that the candidate:  Demonstrated ability to:   1. Perform scene size up 2. Establish nature of incident 3. Manage casualty condition 4. Perform casualty evacuation 5. Write a casualty report |
| 1. Resource Implications | The following resources must be provided:   * 1. Communication equipment   2. Stationery   3. Medical kits   4. Lifting and carrying equipment   5. PPEs   6. Dummies |
| 1. Methods of Assessment | Competency may be accessed through:   * 1. Written tests   2. Oral questioning   3. Third party reports   4. Case studies   5. Observation |
| 1. Context of Assessment | Competency may be assessed:   1. On the job 2. Off the job 3. In work placement (attachment) 4. Off the job assessment must be undertaken in a closely simulated workplace environment |
| 1. Guidance information for assessment | Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. |

# PERFORM EMERGENCY VEHICLE OPERATIONS

**UNIT CODE:** **DM/OS/FIR/CR/06/6/A**

**UNIT DESCRIPTION**

This unit specifies the competencies required to perform emergency vehicle operations. It involves driving emergency vehicle, maintaining emergency vehicles, operating emergency service vehicle and managing equipment inventory.

**ELEMENTS AND PERFORMANCE CRITERIA**

|  |  |
| --- | --- |
| **ELEMENT**  These describe the **key outcomes** which make up **workplace function**. | **PERFORMANCE CRITERIA**  These are **assessable** statements which specify the required level of performance for each of the elements.  ***Bold and italicized terms are elaborated in the range.*** |
| 1. Drive emergency vehicle | 1. Driving speed limit is determined as per the legal guidelines. 2. Road traffic signs are observed as per the legal guidelines. 3. Right of way is observed as per the flow of traffic. 4. Give way right is observed as per the nature of traffic rules. |
| 1. Maintain emergency vehicle | * 1. Fire engine functionality is determined as per standard operating procedures.   2. Fire engine is repaired as per manufactures manual   3. Fire engine is serviced as per manufactures manual   4. Fire engine is cleaned as per standard operating procedures.   5. Fire engine is equipped as per firefighting standards.   6. Fire engine is fuelled as per standard operating procedures. |
| 1. Operate emergency service vehicle | * 1. ***Pump operations*** are performed as per the standard operating procedures.   2. Hydraulic platform operations are performed as per standard operating procedures.   3. Generator operations are performed as per standard operating procedures. |
| 1. Manage equipment inventory | * 1. ***Equipment inventory*** is recorded as per work place procedures.   2. Equipment inventory are restocked as per work place procedures.   3. Equipment inventory are stored as per work place procedures.   4. Safety of equipment inventory is maintained as per work place procedures. |

**RANGE**

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

|  |  |
| --- | --- |
| **Variable** | **Range** |
| 1. Pump operations includes but not limited to: | * + Water discharge   + Pressure controls   + Water level monitoring |
| 1. Equipment inventory includes but not limited to: | * + Hydrant gears   + Hoses   + Branches   + Breaking in gears   + Ladders |

**REQUIRED KNOWLEDGE AND UNDERSTANDING**

The individual needs to demonstrate knowledge of:

**KNOWLEDGE**

* Fire trucks
* Pumps
* Firefighting equipment
* Highway codes
* Traffic Act
* Topography
* Firefighting

**SKILLS**

The individual needs to demonstrate the following skills:

* Driving
* Communication
* Pump operations
* Handling firefighting equipment
* Analytical

**EVIDENCE GUIDE**

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

|  |  |
| --- | --- |
| 1. Critical Aspects of Competency | Assessment requires evidence that the candidate:  Demonstrated ability to:   1. Drive emergency vehicle 2. Maintain emergency vehicle 3. Perform pump operations 4. Take emergency vehicle equipment inventory 5. Ensure safety of equipment |
| 1. Resource Implications | The following resources must be provided:   * 1. Emergency vehicles   2. Work dress   3. PPE   4. Stationery   5. Operation manuals |
| 1. Methods of Assessment | Competency may be accessed through:   * 1. Written tests   2. Oral questioning   3. Third party reports   4. Case studies |
| 1. Context of Assessment | Competency may be assessed:   1. On the job 2. Off the job 3. In work placement (attachment) 4. Off the job assessment must be undertaken in a closely simulated workplace environment |
| 1. Guidance information for assessment | Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. |

# MANAGE HAZARDOUS MATERIAL INCIDENT

**UNIT CODE:** **DM/OS/FIR/CR/07/6/A**

**UNIT DESCRIPTION**

This unit specifies the competencies required manage hazardous material incident. It involves identifying hazardous material, establishing scene safety, controlling hazardous material and decontaminating affected people and the scene.

**ELEMENTS AND PERFORMANCE CRITERIA**

|  |  |
| --- | --- |
| **ELEMENT**  These describe the **key outcomes** which make up **workplace function**. | **PERFORMANCE CRITERIA**  These are **assessable** statements which specify the required level of performance for each of the elements.  ***Bold and italicized terms are elaborated in the range.*** |
| 1. Identify hazardous material | 1. Hazardous material incident is identified as per call details 2. Sample of hazardous material is collected as per hazardous material guidelines 3. Sample of hazardous material is analyzed as per laboratory procedure. 4. Type of hazardous material is identified as per laboratory procedures. |
| 1. Establish scene Safety | * 1. Scene size up is conducted as per the nature of incidence   2. Firefighter self-safety is determined as per the nature of incidence   3. Scene is condoned as per the nature of incidence |
| 1. Control hazardous material | * 1. Source of hazardous material is identified as per call details.   2. Type of hazardous material is identified as per laboratory procedures.   3. Hazardous material is managed as per hazardous material guidelines |
| 1. Decontaminate affected people and scene | * 1. Type of hazardous material is identified as per laboratory procedures.   2. ***Decontamination method*** is determined as per the nature of hazardous material   3. Incident report is prepared as per standard operating procedures. |

**RANGE**

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

|  |  |
| --- | --- |
| **Variable** | **Range** |
| 1. Decontamination method includes but not limited to: | * + Neutralization   + Airing/circulation of air   + Hosing |

**REQUIRED KNOWLEDGE AND UNDERSTANDING**

The individual needs to demonstrate knowledge of:

**KNOWLEDGE**

* Hazardous material
* Hazardous material guidelines
* Decontamination procedures
* Communication methods
* Scene condoning
* Hazardous material handling

**SKILLS**

The individual needs to demonstrate the following skills:

* Decontamination
* Containment
* Tactical
* Communication

**EVIDENCE GUIDE**

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

|  |  |
| --- | --- |
| 1. Critical Aspects of Competency | Assessment requires evidence that the candidate:   1. Identified hazardous material 2. Established scene Safety 3. Controlled hazardous material 4. Decontaminated affected people and scene |
| 1. Resource Implications | The following resources must be provided:   * 1. Communication equipment   2. Hazardous material handling equipment   3. Hazardous material detection equipment |
| 1. Methods of Assessment | Competency may be accessed through:   * 1. Written tests   2. Oral questioning   3. Third party reports   4. Case studies |
| 1. Context of Assessment | Competency may be assessed:   * 1. On the job   2. Off the job   3. In work placement (attachment)   Off the job assessment must be undertaken in a closely simulated workplace environment |
| 1. Guidance information for assessment | Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. |