****

**REPUBLIC OF KENYA**

**NATIONAL OCCUPATIONAL STANDARDS**

**FOR**

**AIRPORT OPERATION MANAGER**

**LEVEL 6**



TVET CDACC

P.O. BOX 15745-00100

NAIROBI

First published 2019

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# FOREWORD

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

Reforms in the education sector are necessary for the achievement of Kenya Vision 2030 and meeting the provisions of the Constitution of Kenya 2010. The education sector had to be aligned to the Constitution and this resulted to the formulation of the Policy Framework for Reforming Education 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 Airport Operations management Level 6. 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 the aviation sector’s growth and sustainable development.

**PRINCIPAL SECRETARY, VOCATIONAL AND TECHNICAL TRAINING**

**MINISTRY OF EDUCATION**

# PREFACE

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

The Technical and Vocational Education and Training Act No. 29 of 2013 and the Sessional Paper No. 4 of 2016 on Reforming Education and Training in Kenya, emphasized the need toreform curriculum development, assessment and certification. This called for shift to CBET to address the mismatch between skills acquired through training and skills needed by industry as well as increase the global competitiveness of Kenyan labour force.

The TVET Curriculum Development, Assessment and Certification Council (TVET CDACC), in conjunction with Aviation Sector Skills Advisory Committee (SSAC), have developed these Occupational Standards for Airport Operations Manager. These occupational standards will be the bases for development of competency-based curriculum for Airport Operations Manager Level 6. These Standards will also be the bases for assessment of an individual for competence certification.

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, Aviation SSAC, expert workers and all those who participated in the development of these occupational standards.

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

**CHAIRMAN, TVET CDACC**

# ACKNOWLEDGMENT

These Occupational Standards were developed through combined effort of various stakeholders from private and public organizations. I am sincerely 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 the Aviation 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**

**AVIATION SECTOR SKILLS ADVISORY COMMITTEE**

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# ACRONYMS

LOG Logistics

AO Airport Operations

BC Basic Competency

CDACC Curriculum Development, Assessment and Certification Council

CR Core Competency

ICT Information Communication Technology

KNQA Kenya National Qualifications Authority

OS Occupational Standards

OSHA Occupation Safety and Health Act

OSHS Occupation Safety and Health Standards

PPE Personal Protective Equipment

SSAC Sector Skills Advisory Committee

TVET Technical and Vocational Education and Training

# KEY TO UNIT CODE

LOG/OS/AO/BC/01/6/A

Industry or sector

Occupational Standards

Occupational area

Type of competency

Competency number

Competency level

Control version

# 

# OVERVIEW

Airport operations management Level 6 consists of competencies that an individual must achieve to manage airport operations in an effective manner. It entails managing dangerous goods, performing airport operations, demonstrating airport economics, carrying out aerodrome works, managing airside safety, providing airspace protection, managing airport environment, managing airport terminal, managing emergency incidents, managing air traffic congestion and marshaling aircraft.

This qualification consists of the following basic and core competencies:

**BASIC COMPETENCIES**

|  |  |
| --- | --- |
| **Unit of Learning Code** | **Unit of Learning Title** |
| LOG/OS/AO/BC/01/6/A | Demonstrate communication skills |
| LOG/OS/AO/BC/02/6/A | Demonstrate numeracy skills |
| LOG/OS/AO/BC/03/6/A | Demonstrate digital literacy |
| LOG/OS/AO/BC/04/6/A | Demonstrate entrepreneurial skills |
| LOG/OS/AO/BC/05/6/A | Demonstrate employability skills |
| LOG/OS/AO/BC/06/6/A | Demonstrate environmental literacy |
| LOG/OS/AO/BC/07/6/A | Demonstrate occupational safety and health practices |

**COMMON COMPETENCIES**

|  |  |
| --- | --- |
| **Unit Code** | **Unit Title** |
| LOG/OS/AO/CC/01/6/A | Manage dangerous goods |
| LOG/OS/AO/CC/02/6/A | Manage emergency incidents |
| LOG/OS/AO/CC/03/6/A | Manage Air Traffic Movement |

**CORE COMPETENCIES**

|  |  |
| --- | --- |
| **Unit Code** | **Unit Title** |
| LOG/OS/AO/CR/01/6/A | Perform airport operations |
| LOG/OS/AO/CR/02/6/A | Demonstrate understanding of airport economics |
| LOG/OS/AO/CR/03/6/A | Carry out aerodrome works |
| LOG/OS/AO/CR/04/6/A | Manage airside safety |
| LOG/OS/AO/CR/05/6/A | Provide airspace protection |
| LOG/OS/AO/CR/06/6/A | Manage airport environment |
| LOG/OS/AO/CR/07/6/A | Manage airport terminal |
| LOG/OS/AO/CR/08/6/A | Marshal aircraft |
| LOG/OS/AO/CR/09/6/A | Perform Warehousing Operations |

# BASIC UNITS OF COMPETENCY

# DEMONSTRATE COMMUNICATION SKILLS

**UNIT CODE:** LOG/OS/AO/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:** LOG/OS/AO/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:** LOG/OS/AO/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 :** LOG/OS/AO/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:** LOG/OS/AO/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:** LOG/OS/AO/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:** LOG/OS/AO/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 UNITS OF COMPETENCY

# MANAGE AIR TRAFFIC MOVEMENT

**UNIT CODE:** LOG/OS/AO/CR/010/6/A

**UNIT DESCRIPTION**

This unit specifies the competencies required to manage air traffic movement**.** It involves managing traffic flow, performing ATC services, establishing traffic sequence, demonstrating understanding of International Civil Aviation Organization (ICAO) rules, regulations and performing aeronautical integrated 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. Manage traffic flow | 1. Traffic order is established in accordance with runway mode and airspace configuration 2. Automated and/or manually determined traffic sequence is observed and monitored as per the SOPs. 3. Traffic flow is adjusted in accordance with standard operating procedures. 4. Traffic flow is controlled as per the SOPs. |
| 1. Perform ATC services | 1. Active listening is maintained based on the ***communication channels.*** 2. Read backs are provided and interpreted as per the SOPs 3. Delivery of voice messages are adjusted to suit receiver as per the SOPs. 4. ATC Messaging protocols are established as per SOPs. |
| 1. Establish traffic sequence | 1. Traffic order is established in accordance with runway mode. 2. Traffic sequence is monitored, and adjustments are made as per the organizational guidelines. 3. Traffic flow instructions are established as per the organizational guidelines. 4. Delaying actions are cancelled and conveyed based on the control tower instructions. |
| 1. Demonstrate understanding of ICAO rules and regulations | 1. Traffic flow is managed based on safety requirements 2. Traffic flow is controlled based on changed conditions as per the organization rules and regulations. 3. ***Hazards*** are identified and controlled as per the work place procedures. 4. Risks are assessed and controlled as per the SOPs. |
| 1. Perform Aeronautical integrated packages | 1. ***Aeronautical integrated packages*** are disseminated. 2. NOTAM Situations are identified as per the SOPs. 3. NOTAM events are identified in accordance with workplace procedures. 4. NOTAM information is issued in accordance with workplace procedures. 5. NOTAM information is filed in accordance with workplace procedures and regulatory requirements. |

**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. Communication channels includes but not limited to: | * Radio * Air satellite mobile |
| 1. Hazards include but not limited to: | * Animals * Bird hazards * Weather * Fatigue |
| 1. Aeronautical integrated packages include but not limited to: | * NOTAMS * PIB(Pre-flight information bulleting) * AIC ( aeronautical information circular) |

**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
* Time management
* Critical thinking
* Creativity
* Analytical
* Decision making

**Required knowledge**

The individual needs to demonstrate knowledge of:

* Read and interpret instructions, regulations, procedures and other information
* Principles of effective communication
* Procedures to be followed in equipment/facility failure
* Prompts and techniques used to assist and cue coordination and communications
* Qualitative aspects of verbal communication including tone, emphasis, stress and frustration
* Read back 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. Demonstrated the ability to manage traffic flow. 2. Demonstrated the ability to perform ATC services. 3. Demonstrated the ability to establish traffic sequence. 4. Demonstrated understanding of ICAO rules and regulations. 5. Demonstrated the ability to perform aeronautical integrated packages. |
| 1. Resource Implications | The following resources must be provided:   1. Case studies |
| 1. Methods of Assessment | Competency may be accessed through:   1. Observation 2. Written tests 3. Oral questioning 4. Assignments |
| 1. Context of Assessment | Competency may be assessed:   1. On-the- job 2. Off the job 3. Work place 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 roles is recommended. Attitude is assessed alongside supervising aviation practices. |

# MANAGE EMERGENCY INCIDENTS

**UNIT CODE:** LOG/OS/AO/CR/09/6/A

**UNIT DESCRIPTION**

This unit specifies the competencies required to manage emergency incidents**.** It involves analyzing emergency information, carrying out emergency response, coordinating emergency responses, assessing emergency response/actions and undertaking post-emergency evaluation

**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. Analyze emergency information | 1. Scope and severity of the emergency is established as per the organizational procedures, 2. Emergency information is collated and assessed as per the SOPs. 3. Responses information is developed based on emergency response planning. 4. Information flows is monitored as per the work place procedures. 5. Team activities and resource allocation are determined and directed in according with work place procedures. |
| 1. Carry out emergency response | 1. Information is collated and communicated as per the organizational policies and procedures. 2. External assistance is coordinated in accordance with organization policies and procedures. 3. Internal and external communication is controlled in accordance with the emergency response plan |
| 1. Coordinate emergency responses | 1. Feedback relating to progress is conveyed as per the work place procedures. 2. Responses and tactics are modified and reassessed in accordance with the status of the emergency. 3. Periodic 'time outs ‘is conducted as per the organizational communication program. |
| 1. Assess emergency response/actions | 1. Emergency information is collected and assessed as per the organizational procedures. 2. ***Mitigation strategies*** are established based on future stages of the emergency in accordance to work place requirements. |
| 1. Undertake post-emergency evaluation | 1. Post-response evaluation is undertaken based on emergency response plan and ***regulatory framework****.* 2. Modification and adjustments to the emergency response plans are communicate as per the SOPs 3. Emergency response planning exercises and training are reviewed and modified in light of the outcomes of the emergency response evaluation. |

**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. **Regulatory framework** includes but not limited to: | * legislative requirements, including work health and safety (WHS) * industry codes of practice and guidelines * environmental regulations and guidelines * Australian and other standards * license and certification requirements |
| 1. Mitigation strategies include but not limited to: | * Preventing future emergencies or minimizing their effects |

**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:

* Critical Thinking
* Decision Making
* Communication
* Time Management
* Organization
* Delegation

**Required knowledge**

The individual needs to demonstrate knowledge of:

* Organizational procedures, including those covering:
* Safety, hazards and hazard control
* Incident, fire and accident
* Environmental protection
* Risk assessment/risk management
* Personal protective equipment (PPE)
* Relevant facility fire management and safety systems
* Communication systems
* Emergency response plans

**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. Analyze emergency information 2. Carry out emergency response 3. Coordinate emergency responses 4. Assess emergency response/actions 5. Undertake post-emergency evaluation |
| 1. Resource Implications | The following resources must be provided:   * 1. Record book   2. Work plans and schedules, policy documents and duty statements. |
| 1. Methods of Assessment | Competency may be accessed through:   * 1. Observation   2. Written tests   3. Oral questioning   4. Assignments |
| 1. Context of Assessment | Competency may be assessed:   1. On-the- job 2. Off the job 3. Work place 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 roles is recommended. Attitude is assessed alongside supervising aviation practices. |

# MANAGE DANGEROUS GOODS

**UNIT CODE:** LOG/OS/AO/CR/01/6/A

**UNIT DESCRIPTION**

This unit specifies the competencies required to manage dangerous goods**.** It involves inspecting dangerous goods, classifying dangerous goods, preparing dangerous goods records, and loading/off-loading dangerous goods.

**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. Inspect dangerous goods | 1. Dangerous goods are screened as per the work place requirements. 2. Packaged dangerous goods are labeled in accordance with workplace procedures. 3. Dangerous goods are examined based on manufacturing instructions. |
| 1. Classify dangerous goods | 1. Information is confirmed based on cargo details as per the SOPs. 2. Dangerous goods are identified in accordance with organizational procedures. 3. Dangerous goods are labeled as per SOPs 4. Dangerous goods records are maintained as per the work place procedures. 5. Dangerous goods are classified in accordance with workplace procedures and regulatory requirements. |
| 1. Package dangerous goods | 1. ***Absorbent materials*** and cushioning are selected in accordance with relevant regulatory requirements. 2. Dangerous goods are packed as per work place procedures. 3. Dangerous goods are packaged as per the regulatory requirements. |
| 1. Prepare dangerous goods records | 1. Dangerous goods instructions are selected in accordance with manufacturing manuals. 2. Goods are recorded in accordance with workplace procedures and regulatory requirements. 3. Dangerous goods documents are maintained based on goods information as per the work place requirements. |
| 1. Load/off-load dangerous goods | 1. ***Personal protective equipment*** (PPE) is identified as per the organizational requirement. 2. Aircraft is loaded/unloaded in accordance with workplace procedures. 3. Load/off-load is separated based on class and subsidiary risk in accordance with workplace procedures. 4. Incident or accident is monitored based on emergency 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. Personal protective equipment includes but not limited to: | * Gloves * Musk * Gum boots * Dust cloths * Helmets * Rain coats * Overalls * Safety boats |
| 1. Absorbent materials include but not limited to: | * Absorbent Socks * Loose Absorbents * Specialty Absorbents * Reusable Absorbents |

**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
* Communication
* Decision making
* Critical thinking

**Required knowledge**

The individual needs to demonstrate knowledge of:

* Characteristics of various classes of explosives/dangerous goods.
* Compatibility of various types of explosives and/or dangerous goods
* Housekeeping standards and procedures
* Manual handling techniques and manually-operated load shifting equipment required for loading/off-loading.
* Methods of placarding or marking a vehicle carrying explosives and/or dangerous goods

**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. Inspected dangerous goods 2. Classified dangerous goods 3. Packaged dangerous goods 4. Prepared dangerous goods records 5. Loaded/off-loaded dangerous goods |
| 2. Resource Implications | The following resources must be provided:   1. Work plans and schedules, 2. Policy documents. |
| 1. Methods of Assessment | Competency may be accessed through:   1. Observation 2. Written tests 3. Oral questioning 4. Third party report |
| 1. Context of Assessment | Competency may be assessed:   1. On-the- job 2. Off the job 3. 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 roles is recommended. Attitude is assessed alongside supervising aviation practices. |

# CORE UNITS OF COMPETENCY

# PERFORM AIRPORT OPERATIONS

**UNIT CODE:** LOG/OS/AO/CR/02/6/A

**UNIT DESCRIPTION**

This unit specifies the competencies required to **perform airport operations.** It involves managing airport security, managing passenger process, managing airport meteorology, managing airport cargo, managing airport telecommunication, preparing airport schedules, managing airport users and maintaining airport 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 airport security | 1. Potential risks to the security and safety of flight is assessed as per the work place procedures and regulatory requirements. 2. Safety and security risk control measures are determined and implemented as per the procedures, policies and regulations. 3. Routine and on-occurrence monitoring of aircraft safety and security is conducted in accordance with workplace procedures and regulatory requirements. 4. Breaches of safety and security are identified and managed as per the workplace procedures. 5. Passenger behavior is monitored based on the unlawful interference. |
| 1. Manage passenger process | 1. Passengers are briefed on safety, normal and emergency procedures in accordance with regulatory requirements. 2. Passenger safety, comfort and well-being are provided for in accordance with regulatory requirements and workplace procedures. 3. Passengers are informed of potential hazardous conditions and emergencies in accordance with regulatory requirements. 4. Passengers are advised of nature of emergency and the procedures as per the organization precautions. |
| 1. Manage airport meteorology | 1. ***Meteorology equipment/materials*** are assembled as per the work place procedures. 2. Meteorological parameters are identified based on the required equipment as per the SOPS. 3. Client destination, access, timing requirements is confirmed based on the weather conditions. 4. Stow equipment/materials are assembled based on the weather conditions. 5. Meteorological information is analyzed based on weather maps. 6. Weather patterns for different time, periods and geographical locations are established. |
| 1. Manage airport cargo | 1. Load features are identified as per the work place requirements. 2. Dangerous or hazardous goods are identified and handled in accordance with organizational regulations requirements. 3. Load is packed/unpacked based on the available space as per standard operating procedures (SOPs). 4. Goods/cargo is loaded in accordance with mass and loading regulations. 5. Lifting aids and appliances are selected in accordance with workplace procedures. 6. Goods requiring special handling and/or documentation are identified as per the work place procedures. 7. Transferred material is restacked based on the work place procedures. |
| 1. Manage airport telecommunication | 1. Transmission and receipt of radio telephone messages is carried out in accordance with workplace procedures and regulatory requirements. 2. Emergency and urgency transmissions procedures are carried out based on the En Route Supplement. 3. Responses are carried out based on received messages in accordance with workplace procedures. 4. Listening watch is maintained in accordance with workplace procedures. |
| 1. Prepare airport schedules | 1. Flight options are identified based on customer needs. 2. Flight itineraries are created based on national and international flights 3. Costs of concession fees are determined. 4. Taxes and surcharges fees are determined as per the regulatory requirements. 5. Flight schedules are generated as per the standard operating procedures. |
| 1. Manage airport users | 1. Airport users are briefed on safety, normal and emergency procedures in accordance with regulatory requirements. 2. Airport users’ safety, comfort and wellbeing are provided for in accordance with regulatory requirements and workplace procedures. 3. Airport users are managed on the ground and in the air in accordance with regulatory requirements. 4. Airport users managed during abnormal or emergency situation in accordance with regulatory requirements. 5. Communication is established and maintained as per the SOPs. |
| 1. Maintain airport equipment | 1. Maintenance procedures, records and safety requirements are identified as per the company regulations. 2. Maintenance schedules are prepared in accordance with operational requirements. 3. Damaged, worn and/or spent components are repaired/replaced as per the SOPs. 4. Instruments and equipment are cleaned as per the SOPs. 5. Instruments and equipment are stored in accordance with workplace and/or manufacturer requirements. 6. Maintenance records are kept in accordance with workplace 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. Meteorology equipment/materials includes but not limited to: | * Wind Vane. * Rain Gauge * Wind shock * Campbell Stokes Recorder. * Barometer * Humidity Sensors |

**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**
* **Problem solving**
* **Planning**
* **Organizing**

**Required knowledge**

The individual needs to demonstrate knowledge of:

* Principles of effective radio communications
* Radio failure procedures
* Standard radio telecommunication phraseology
* Transponder codes for radio failure and emergency.
* Functions of radiotelephone equipment
* Operating and maintenance procedures

**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 airport security 2. Managed passenger process 3. Demonstrated the ability to manage airport meteorology 4. Managed airport cargo 5. Managed airport telecommunication 6. Prepared airport schedules 7. Managed airport users 8. Maintained airport equipment. |
| 1. Resource Implications | The following resources must be provided:   * 1. Work plans and schedules, policy documents and duty statements. |
| 1. Methods of Assessment | Competency may be accessed through:   1. Observation 2. Written tests 3. Oral questioning 4. Assignments |
| 1. Context of Assessment | Competency may be assessed:   * 1. On-the- job   2. Off the job   3. Work place 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 roles is recommended. Attitude is assessed alongside supervising aviation practices. |

# APPLY AIRPORT ECONOMICS

**UNIT CODE:** LOG/OS/AO/CR/03/6/A

**UNIT DESCRIPTION**

This unit specifies the competencies required to apply airport economics**.** It involves applying airport economic principles, evaluating airport economic aspects, reviewing economic work and maintaining airport economic policies.

**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 airport economic principles | 1. Knowledge of ***economic principles*** are developed and applied. 2. ***Microeconomic theory*** of markets is applied based on the financial products. 3. Capital adequacy regulation and requirements are applied based on work functions. |
| 1. Evaluate airport economic aspects | 1. ***Financial modeling techniques*** are applied to economic data in decision making. 2. Asset pricing models and their application are established as per the SOPs. 3. Models of determining organizational value in relation to capital structures are applied. |
| 1. Review economic work | 1. Economic performance methods are established and applied as per the work place procedures. 2. Economic performance work is analyzed. 3. Economic work is evaluated in the context of economic principles |
| 1. Maintain airport economic policies | 1. Current economic theories and their impact on the industry are analyzed and applied based on economic performance. 2. Contemporary economic principles are integrated into work practices as per the SOPs. |

**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. Economic principlesinclude but not limited to: | * Market equilibrium * Command and mixed economies * Inflation, deflation and stagflation * Gross domestic product (gdp) * Direct and indirect taxes, subsidies * Cause and effect. |
| 1. Microeconomic theory ofmarketsinclude but not limited to: | * Monopoly and competition * Scarcity * Opportunity cost * Market failure * Resource allocation * Fixed and variable costs * Average and marginal costs. |
| 1. Financial modelingtechniquesinclude but are not limited to | * Net Present Value (NPV) * break-even analysis * yield curves * forecasting cash inflow and outflow * discounted cash flow |

**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
* Adaptability
* Communication
* Critical-thinking

**Required knowledge**

The individual needs to demonstrate knowledge of:

* Economic theories and valuation of assets.
* Financial modeling techniques and tools.
* Industry/company financial markets, products and services.
* Relevant legislation and statutory requirements and industry codes of practice.
* Techniques and tools for evaluation and interpretation of research data.
* Economic and political climate relating to the financial industry.

**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. Demonstrated the ability to apply airport economic principles. 2. Demonstrated the ability to evaluate airport economic aspects. 3. Demonstrated the ability to review economic work. 4. Demonstrated the ability to maintain airport economic policies. |
| 1. Resource Implications | The following resources must be provided:   * 1. Case study   2. Work plans and schedules, policy documents and duty statements. |
| 1. Methods of Assessment | Competency may be accessed through:   * 1. Observation   2. Written tests   3. Oral questioning   4. Third party reports |
| 1. Context of Assessment | Competency may be assessed:   1. On-the- job 2. Off –the- job 3. 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 roles is recommended. Attitude is assessed alongside supervising aviation practices. |

# CARRY OUT AERODROME WORKS

**UNIT CODE:** LOG/OS/AO/CR/04/6/A

**UNIT DESCRIPTION**

This unit specifies the competencies required to determine aerodrome works. It involves inspecting aerodrome serviceability, reporting hazardous unserviceability, facilitating repairs aerodrome, reporting aerodrome serviceability, facilitating aerodrome access and maintaining aerodrome works.

**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. Inspect aerodrome serviceability | 1. Access to aerodrome is arranged as per the organizational policies and guidelines. 2. ***Aerodromes*** are inspected for hazards and unserviceability as per the SOPs. 3. Unserviceability of the aerodrome is identified in accordance with workplace procedures. 4. Unserviceability is rectified in accordance with workplace procedures and regulatory requirements. |
| 1. Report hazardous unserviceability | 1. Official notification of hazardous situations or unserviceabilities, are assessed as per the SOPs. 2. Relevant authorities or organizations are notified of hazardous situations or unserviceabilities in accordance with workplace procedures and regulatory requirements 3. Reports are prepared and disseminated in accordance with workplace procedures. |
| 1. Facilitate aerodrome repairs | 1. Organizations are notified of works that may disrupt aircraft operations in accordance with workplace procedures. 2. Temporary aerodrome marks, markings and lighting are deployed based on repairs as per the work place procedures. 3. Communication procedures are established as per the organizational requirements. 4. Hazardous situations and unserviceabilities are rectified in accordance with workplace procedures and regulatory requirements. |
| 1. Report aerodrome serviceability | 1. Restoration of aerodrome serviceability is determined in accordance with workplace procedures. 2. Temporary aerodrome marks, markings and lighting are removed based on repairs as per the work place procedures. 3. Authorities are notified of restoration of aerodrome serviceability in accordance with workplace procedures and regulatory requirements. |
| 1. Facilitate aerodrome access | 1. Access and authorization for vehicles and personnel are determined in accordance with workplace procedures. 2. Personnel, vehicles and equipment entering airside are inspected based on compliance requirements. 3. Facilitation of works personnel and vehicles is carried out as per the work place requirements. 4. Vehicles are inspected and marked as per the work place requirements. |
| 1. Prepare aerodrome works | 1. Notification of impending aerodrome works is confirmed as per the work place procedures. 2. Processes for safe conduct of aerodrome works are developed or adapted based on drawings and Method of Working Plans (MOWPs) in accordance with workplace procedures. 3. Factors that affect the safety and/or security of an aviation workplace are determined. 4. ***Workplace hazards*** are identified as per the SOPs. 5. Risks are assessed and control measures put in place as per the work place procedures. |
| 1. Maintain aerodrome works. | 1. Unserviceability markers and barriers are established in accordance with workplace procedures and regulations 2. Aerodrome works are facilitated in accordance with MOWPs or other workplace procedures. 3. Activities of personnel, vehicles and plant on the movement area are managed as per the organizational requirements. 4. Works are performed in accordance with relevant MOWP or Notice to Airmen (NOTAM). |

**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. Aerodromes includes but not limited to: | * Aerodrome environs: * Areas surrounding navigational aids * Buildings * Drainage systems * Fences and gates |
| 1. Workplace hazards include but not limited to: | * aircraft noise * aircraft movements * aircraft propellers and rotors * dust * exposed electrical leads and connections * foreign object debris (FOD) * fumes |
| 1. Aerodrome hazards include but are not limited to | * animal and bird hazards and objects becoming hazards within obstacle limitation areas * movement areas: * apron * clearway |

**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:

* Critical Thinking
* Time Management
* Decision Making
* Communication

**Required knowledge**

The individual needs to demonstrate knowledge of:

* Distance measuring equipment
* Instrument landing system
* Non-directional beacons
* Signal circle markers
* Unserviceability lighting
* Unserviceability cross markers
* Unserviceability cones

**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. Inspected aerodrome for unserviceability 2. Reported hazardous unserviceability 3. Facilitated aerodrome repairs 4. Reported aerodrome unserviceability 5. Demonstrated the ability to facilitate aerodrome access 6. Demonstrated the ability to prepare aerodrome works 7. Maintained aerodrome works. |
| 1. Resource Implications | The following resources must be provided:   1. Work plans and schedules, policy documents and duty statements. |
| 1. Methods of Assessment | Competency may be accessed through:   * 1. Observation   2. Written tests   3. Oral questioning   4. Third party reports |
| 1. Context of Assessment | Competency may be assessed:   1. On-the- job 2. Off the job 3. Work place 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 roles is recommended. Attitude is assessed alongside supervising aviation practices. |

# MANAGE AIRSIDE SAFETY

**UNIT CODE:** LOG/OS/AO/CR/05/6/A

**UNIT DESCRIPTION**

This unit specifies the competencies required to manage airside safety**.** It involves developing emergency and damage control plans, developing security risk management plans, maintaining the operational security systems, organizing emergency drills, managing airside emergencies, maintaining operational safety and maintaining security risks response.

**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. Develop emergency control plans | 1. Personal protective equipment (PPE) are identified as per the SOPs. 2. Airside hazards are identified and analyzed based on risk management controls. 3. Airside operating conditions and restrictions are established and applied as per the work place procedures. 4. Airside safety and operational briefings are received and acknowledged as per the organizational policies. |
| 1. Develop security risk management plans | 1. Risks and threats records and reviewed based on management decisions. 2. Treatment options and counter measures are determined based on the occurrence or consequences of the risk. 3. Cost-benefit analysis is conducted based on the risk management. 4. Stakeholders are consulted on the cost-benefit analysis based on risk management report. 5. Risk management plan is developed in accordance with regulatory requirements. |
| 1. Maintain operational security systems | 1. Security plan is prepared based on organization’s security objectives as per the SOPs. 2. Threat assessments, current exposure and current protective security arrangements are summarized based on the plan. 3. Security strategies for implementing, monitoring and evaluating countermeasures are outlined. 4. Timeframes and security budget are determined based on countermeasures. 5. Security plan is approved and communicated to stakeholders. |
| 1. Organize emergency drills | 1. Emergency drills are planned and conducted according to regulatory requirements and organizational procedures. 2. Instructions are disseminated to other user as per organizational procedures. 3. Musters and drills are reviewed based on objectives. 4. Records are prepared according to regulatory requirements and organizational procedures. |
| 1. Manage Airside emergencies | 1. ***Potential emergency*** awareness is created according to contingency plans. 2. Emergencies ***information*** and instructions are disseminated as per the work place procedures. 3. Procedures are implemented to combat emergency and to protect persons on board. 4. Communications procedures are established with others to facilitate the emergency response process. 5. Contact is maintained with others at all times to keep them briefed on the emergency response process. 6. Cessation of emergency is communicated to appropriate personnel. |
| 1. Maintain operational safety | 1. Resources and equipment are identified based on security risk situations. 2. Environmental factors are monitored, assessed and reviewed as per the organizational policies. 3. Safety checks are carried out according to organizational procedures. |
| 1. Maintain security risks response | 1. Risk situations are identified and assessed as per the organization objectives. 2. Response to security risk is carried out according to security risk management plan. 3. Changing circumstances are monitored based on the responses as per the organizational requirements. 4. Security risks response records are maintained according to organizational 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. Potential emergencies includes but not limited to: | * Accidents * Bomb threat * Collision * Fire or explosion * Flooding * Incidents * Grounding |
| 1. Information include but are not limited to | * Documented instructions * Drills * Meetings * Notice boards * Pamphlets * Training session |

**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
* Lifting
* Surveillance
* Decision making

**Required knowledge**

* The individual needs to demonstrate knowledge of:
* Concept of reserve buoyancy and its relevance to damage control in vessels
* Faults that can occur with fire detection, firefighting, lifesaving and safety equipment, and systems and appropriate remedial action and solutions
* Functions and use of lifesaving appliances
* General principles of damage control and the manner in which the watertight integrity of the hull is maintained on a vessel
* Importance of maintaining fire detection, firefighting, lifesaving and safety equipment and systems, and potential consequences if the equipment or systems are not operational during an emergency

**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 emergency and damage control plans 2. Developed security risk management plans 3. Maintained the operational condition of firefighting, lifesaving and security systems 4. Organized fire and abandon emergency drills 5. Managed Airside emergencies. 6. Maintained operational safety. 7. Maintained security risks response. |
| 1. Resource Implications | The following resources must be provided:   * 1. Work plans and schedules |
| 1. Methods of Assessment | Competency may be accessed through:   1. Observation 2. Written tests 3. Oral questioning 4. Third party report |
| 1. Context of Assessment | Competency may be assessed:   1. On-the- job 2. Off the job 3. 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 roles is recommended. Attitude is assessed alongside supervising aviation practices. |

# PROVIDE AIRSPACE PROTECTION

**UNIT CODE:** LOG/OS/AO/CR/06/6/A

**UNIT DESCRIPTION**

This unit specifies the competencies required to provide airspace protection**.** It involves applying controlled airspace procedures, applying abnormal and emergency response procedures, managing passengers during normal operations, and managing passengers during abnormal or emergency situation and managing air cargo.

**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 controlled airspace procedures | 1. ***Control airspaces*** procedures are determined as per the SOPs. 2. Operational clearance requirement within the control airspaces are carried out to as per the SOPs. 3. Weather conditions for clearance are communicated as per the work place procedures. 4. Air traffic service requirements for a change in level within CTA during routine flight are carried out as per the SOPs. 5. Navigational chart information is identified and interpreted as per the SOPs. 6. Separation standards between flights in various classes of airspaces are established according to regulatory procedures. 7. Restricted, prohibited and danger areas separation requirements are identified and maintained. 8. Radio and navigation aid frequencies are identified as per the SOPs. 9. Aircraft altitude and tracking tolerances are established and maintained as per the regulatory requirements. 10. ***Radar vectoring procedures*** are implemented as per the organizational policies. |
| 1. Apply abnormal and emergency response procedures | 1. Aircraft is configured to maintain safe operating conditions as per the SOPs. 2. Aircraft position and intention broadcasts are carried out as per the work place procedures. 3. Radio communication failure or emergency transponder codes are selected within airspace as per the work place procedures. 4. Air traffic service requirements for a change in level within CTA during abnormal or emergency situations are established. |
| 1. Manage passengers during normal operations | 1. Passengers are briefed on safety, normal and emergency procedures before flight in accordance with regulatory requirements. 2. Passenger safety, comfort and wellbeing are provided for in accordance with regulatory requirements and workplace procedures. 3. Passengers are managed on the ground and in air as per regulatory requirements. |
| 1. Manage passengers during abnormal or emergency | 1. Passengers are informed and briefed of potential hazardous conditions and emergencies in accordance with regulatory requirements. 2. Passengers are advised of nature of emergency and precautions procedures as per the SOPs. 3. Communication is established and maintained as per the organization polices. 4. Passengers are managed during an emergency in accordance with regulatory requirements. |
| 1. Manage Air cargo | 1. Cargo calculations are carried out in accordance with workplace procedures. 2. Dangerous goods handling procedures are identified and applied as per the SOPs. 3. Cargo is managed in accordance with regulatory requirements and workplace 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. Radar vectoring proceduresincludes but not limited to: | * Radio * Phraseologies |
| 1. Control airspaces includes but not limited to: | * CTA (control area) * CTR (control zones) * TMA (terminal control area) |

**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 relations
* Multi-Tasking
* Surveillance
* Judgment

**Required knowledge**

The individual needs to demonstrate knowledge of:

* Applicable emergency procedures
* Cargo management procedures
* Dangerous goods awareness
* Precautionary measures
* Local procedures for passenger movement

**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. Demonstrated the ability to apply controlled airspace procedures. 2. Demonstrated the ability to apply abnormal and emergency response procedures. 3. Demonstrated the ability to manage passengers during normal operations. 4. Demonstrated the ability to manage passengers during an abnormal or emergency situation. 5. Managed airspace cargo |
| 1. Resource Implications | The following resources must be provided:   1. Work plans and schedules. |
| 1. Methods of Assessment | Competency may be accessed through:   * 1. Observation   2. Written tests   3. Oral questioning   4. Third party reports |
| 1. Context of Assessment | Competency may be assessed:   1. On-the- job 2. Off the job 3. 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 roles is recommended. Attitude is assessed alongside supervising aviation practices. |

# MANAGE AIRPORT SECURITY

**UNIT CODE:** LOG/OS/AO/CR/07/6/A

**UNIT DESCRIPTION**

This unit specifies the competencies required to manage airport security. It involves designing airport layout, managing airport environment, managing people on security zone, inspecting vehicles on security zone, managing vehicles on security zone and managing control systems access.

**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. Design airport layout | 1. ***Airfield pavement improvements*** are established as per the work place requirements. 2. Support equipment is determined in accordance with organization requirement. 3. ***Navigational and lighting equipment*** are established as per regulatory requirement. 4. Access to airside and landside are determined as per regulatory requirements. 5. ***Structures*** are designed based on the master plan in accordance with regulatory requirements. |
| 1. Manage airport environment | 1. Airport location is established based on aviation requirement. 2. Topography and geological aspects are analyzed as per the aviation requirements. 3. Noise levels are determined as per the aviation requirements. 4. Obstructions and ground accessibility is determined as per the aviation requirements. 5. Weather patterns are analyzed based on the metrological reports. 6. Future development plans are determined based on the economic growth. |
| 1. Manage people on security zone | 1. Personal protective equipment are identified and selected in accordance with workplace procedures. 2. Identification details of persons entering airside security zones or landside security zones are verified in accordance with legislative requirements. 3. Entry validations are issued and collected in accordance with workplace procedures. 4. Incidents that infringe or breach workplace procedures are reported and recorded in accordance with legislative requirements. 5. Persons are received in a professional and courteous manner and processed in accordance with workplace procedures. 6. Security records are maintained in accordance with security program. |
| 1. Inspect vehicles on security zone | 1. Inspection of baggage and/or vehicles is carried out in accordance with legislative requirements and workplace procedures. 2. Prohibited items or weapons are identified based on the inspection in accordance with legislative requirements. 3. Notification of the detection of prohibited items or weapons is carried out in accordance with workplace procedures. 4. Inspection declining requests are reported and processed in accordance workplace procedures. |
| 1. Manage vehicles on security zone | 1. Vehicle entry validations are determined in accordance with the organization transport security program. 2. Outgoing vehicles are processed based on documentation in accordance with workplace procedures. 3. Incoming vehicles are directed in accordance with workplace procedures. 4. Incidents that infringe or breach legislative requirements are reported in accordance with workplace procedures. 5. Security zone access control is conducted in a professional and courteous manner in accordance with workplace procedures. |
| 1. Manage control systems access | 1. Keys and access control devices for airside security zones and landside security zones at an airport are controlled, recorded, monitored and reconciled in accordance with workplace procedures. 2. Barriers are operated and controlled in accordance with workplace procedures. 3. Control systems to secure airside security zones and landside security zones are operated in accordance with manufacturer instructions and workplace procedures. 4. Keypad and alarm entry systems for airside security zones and landside security zones are activated and deactivated in accordance with workplace procedures. 5. Documentation is maintained in accordance with workplace 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. Personal protective equipment includes but not limited to: | * Communications equipment * Earmuffs * Headwear * Safety vest * Sun protection |
| 1. Airfield pavement improvements include but not limited to: | * Runway * Taxiway * Apron |
| 1. Structure***s*** include but are not limited to | * Hanger * Terminal |
| 1. Navigational and lighting equipment includes and is not limited to | * Rader * Towers * Automatic identification * Compasses |

**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
* Creativity
* Interpersonal relations
* Analytical
* Integrity
* Decision making

**Required knowledge**

The individual needs to demonstrate knowledge of:

* Airport alarm systems and locations for airside security zones or landside security zones
* Airport communication codes for airside security zones or landside security zones
* Airport procedures and protocols for operating communications and computing equipment in airside security zones or landside security zones
* Appropriate actions to resolve and/or avoid issues when controlling access to and exit from airside security zones or landside security zones at an airport

**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. Demonstrated the ability to designed airport layout 2. Managed airport environment 3. Managed people on security zone 4. Inspected vehicles on security zone 5. Managed vehicles traffic security zone 6. Managed access control systems |
| 1. Resource Implications | The following resources must be provided:   * 1. Work plans and schedules, policy documents and duty statements. |
| 1. Methods of Assessment | Competency may be accessed through:   * 1. Observation   2. Written tests   3. Oral questioning   4. Third party reports |
| 1. Context of Assessment | Competency may be assessed:   1. On-the- job 2. Off the job 3. 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 roles is recommended. Attitude is assessed alongside supervising aviation practices. |

# MANAGE AIRPORT TERMINAL

**UNIT CODE:** LOG/OS/AO/CR/08/6/A

**UNIT DESCRIPTION**

This unit specifies the competencies required to manage airport terminal**.** It involves preparing airport terminal, overseeing terminal operations, terminal resourcing, managing safety system and developing terminal emergency procedures.

**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. Prepare airport terminal | 1. Terminal operations requirements are identified as per the work place requirements. 2. Factors involved in terminal operations are identified and interpreted as per the SOPs. 3. ***Terminal operations Methods*** are identified and measured as per the work place procedures. 4. Functionality of terminal layout is established as per the work place procedures. 5. Chain of responsibility requirements are established as per the SOPs. |
| 1. Oversee terminal operations | 1. Terminal optimal capacity factors and operational requirements are identified and communicated as per the work place procedures. 2. Terminal development strategies are formulated as per the operational requirements. 3. Communications systems and protocols are determined and implemented. 4. Protocols for rolling out stock arrivals or departures are developed and applied as per the work place procedures. |
| 1. Oversee terminal resourcing | 1. Equipment required for terminal operations are identified and obtained in accordance with organizational policies and procedures. 2. Contractor/external service requirements are documented in accordance with organizational policies and procedures. 3. Terminal maintenance requirements are identified in accordance with organizational policies and procedures 4. Responsibilities at interfaces with other transport operators are identified and allocated in accordance with regulatory and organizational policies. |
| 1. Manage safety system | 1. Terminal safety plans are established in accordance with organizational policies and procedures. 2. Required safety equipment is determined in accordance with organizational policies and procedures. 3. Organizational safety management systems (SMS) are identified and developed in accordance with organizational policies and procedures. 4. Stabling of vehicles within terminal is monitored to ensure compliance with SMS. 5. Contractor/visitor access protocols are implemented and communicated in accordance with organizational policies and procedures. |
| 1. Develop terminal emergency procedures | 1. Terminal emergency equipment requirements are identified and documented. 2. ***Terminal hazards and risks*** are identified and assessed as per the SOPs. 3. Terminal emergency response procedures are communicated in accordance with organizational policies and procedures 4. Evacuation drills and debriefs are arranged in accordance with organizational policies and procedures. 5. Evacuation drills issues and/or debriefs are identified and addressed. |

**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. Terminal operations Methods includes but not limited to: | * Any match operation * None match operation * Collect operation * Count operation * For each operation * Min operation * Max operation * Reduce operation |
| 1. Terminal hazards and risks include but not limited to: | * Dusty cargoes or respiratory sensitizers. * Flammable, toxic, poisonous or corrosive cargoes. * Fumigated cargoes. * Gases due to decomposition or bacterial action of some cargoes. * Vehicles exhaust emissions. * Fire |

**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 relations
* Assertive
* Communication
* Time management
* Organization
* Problem solving

**Required knowledge**

The individual needs to demonstrate knowledge of:

* Terminal operations
* Key principles and practices associated with terminal operations
* Rail industry terminology, including terminology used in airport industry standards and codes of practice
* Terminal infrastructure capacities related to terminal operations

**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. Prepared airport terminal 2. Managed terminal operations 3. Managed terminal resourcing 4. Managed safety system 5. Developed terminal emergency procedures |
| 1. Resource Implications | The following resources must be provided:   1. Work plans and schedules, policy documents and duty statements. |
| 1. Methods of Assessment | Competency may be accessed through:   * 1. Observation   2. Written tests   3. Oral questioning   4. Assignments |
| 1. Context of Assessment | Competency may be assessed:   1. On-the- job 2. Off the job 3. Work place 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 roles is recommended. Attitude is assessed alongside supervising aviation practices. |

# MARSHAL AIRCRAFT

**UNIT CODE:** LOG/OS/AO/CR/11/6/A

**UNIT DESCRIPTION**

This unit specifies the competencies required to marshal aircraft**.** It involves preparing aircraft for marshaling, establishing aircraft parking and conducting aircraft marshaling.

**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. Prepare Aircraft for marshaling. | 1. Arrival/departure information is received and processed in accordance with workplace procedures. 2. Personal protective equipment is identified and selected as per work place procedures. 3. ***Marshaling*** requirement for different aircraft is determined as per the organization requirements. 4. Hazards and risks are identified and assessed based on hazard management as per the organization procedures. 5. Aircraft parking position is identified and confirmed as per work place procedures. 6. Marshaling records are prepared and processed in accordance with workplace procedures. |
| 1. Establish aircraft parking | 1. ***Marshaling equipment***, aircraft parking, and ancillary support equipment are identified and selected in accordance with manufacturer instructions and workplace procedures. 2. Aircraft parking movement is conducted in accordance with workplace procedures. 3. Environmental factors are monitored as per organization procedures. |
| 1. Carry out aircraft marshaling | 1. Procedures during aircraft marshaling are established as per organization requirements. 2. Marshaling signals and/or communications are determined as per the SOPs. 3. Visual contact with pilot, other aircrew and/or ground staff is maintained as per work place procedures. 4. Safety distances between aircraft and ground personnel/obstructions are identified and maintained. 5. Aircraft is secured in accordance with workplace procedures. 6. Wind speed and direction are monitored as per SOPs. |

**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. Marshaling includes but not limited to: | * Aircraft parking * Allocating and prioritizing * Cargo loading and unloading * Hover * Hover taxiing * Refueling operations * Rotor engagement * Start-up * Shutdown |
| 1. Marshaling equipment include but not limited to: | * Flags * Hand signals * Paddles * Torches * Wands |

**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:

* communicating
* standard hand signals
* Identify and correctly use marshaling and ancillary support equipment
* Complete documentation related to marshaling aircraft
* Interpersonal

**Required knowledge**

The individual needs to demonstrate knowledge of:

* Aircraft danger zones
* Aircraft operating restrictions in confined areas
* Day and night marshaling signals
* Effects of wind speed and direction on aircraft
* Landing/taking-off and starting of aircraft
* Manufacturer instructions for equipment used for marshaling aircraft
* Marshaling, ground support and aircraft equipment selection and serviceability

**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. Prepared aircraft for marshaling. 2. Established aircraft parking. 3. Carried out aircraft marshaling |
| 1. Resource Implications | The following resources must be provided:   1. case studies and/or simulations 2. workplace procedures |
| 1. Methods of Assessment | Competency may be accessed through:   1. Observation 2. Written tests 3. Oral questioning 4. Third part reports |
| 1. Context of Assessment | Competency may be assessed:   1. On-the- job 2. Off the job 3. 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 roles is recommended. Attitude is assessed alongside supervising aviation practices. |

# PERFORM WAREHOUSING OPERATIONS

**UNIT CODE:** LOG/OS/AO/CR/12/6/A

**UNIT DESCRIPTION**

This unit describes competencies required to perform warehouse operations. It involves designing warehouse layout, maintaining warehouse goods layout, maintaining stored goods records, maintaining stored goods quality, securing stored goods and managing warehouse plant and equipment.

**ELEMENTS AND PERFORMANCE CRITERIA**

| **ELEMENT** | **PERFORMANCE CRITERIA**  ***(Bold and italicized terms are elaborated in the Range)*** |
| --- | --- |
| 1. Design warehouse layout | * 1. Warehouse is designed based on nature of goods   2. Warehouse is laid out based on nature of goods |
| 1. Maintain warehoused goods layout | * 1. ***Goods are classified*** based on their storage requirements.   2. Storage space, materials and handling equipment are identified as per SOPs.   3. Goods are arranged in the warehouse based on their classification   4. Warehouse cleanliness and tidiness is maintained in accordance with workplace policy. |
| 1. Maintain stored goods records | * 1. Registers are prepared as per standard operating procedures.   2. Warehouse goods are recorded as per standard operating procedures.   3. ***Delivery documents*** are filed as per standard operating procedures.   4. Stock taking is carried out as per SOPs. |
| 1. Maintain stored goods quality | * 1. ***Storage pests*** are controlled as per work place requirements.   2. Goods are stored based on their ***storage requirements***   3. Warehouse goods are issued based on stock control principles.   4. Warehouse goods are secured as per workplace policy.   5. Warehouse is maintained as per ***legal requirements.*** |
| 1. Secure stored goods | * 1. ***High value goods*** are stored as per standard operating procedures.   2. Warehouses are built based on strong walls and reinforced roofs as per standard operating procedures.   3. Warehouses are secured as per workplace policy and standards operation procedures.   4. Surveillance’s facilities are as per the work place policies.   5. Warehouse security guards are vetted as per the work place procedures.   6. ***Security surveillance systems*** are installed and monitored as per workplace policy.   7. Risk is assessed and ***mitigation measures*** put in place as per workplace policy. |
| 1. Manage warehouse plant and equipment | * 1. Plant and equipment are identified based on warehouse layout and goods specifications.   2. Warehouse plant and equipment are procured as per SOPs   3. Warehouse plant and equipment maintenance schedule is prepared as per SOPs.   4. Warehouse plant and equipment are maintained as per work place procedure.   5. Maintenance reports are prepared as per SOPs |

**Range**

|  |  |
| --- | --- |
| **Variable** | **Range** |
| 1. Goods are classified May include but is not limited to | * Value * Perishability * Activity based classification * Flammability * Strength |
| 1. Delivery documents May include but is not limited to | * Copy of contract agreement * Copy of LPO * Copy of invoice * Copy of delivery note * Copy of inspection report * Copy of payment voucher |
| 1. Storage pests May include but is not limited to | * Rodents * Insects |
| 1. Storage requirements May include but is not limited to | * Cold dry place * Dry place * Humid conditions * Moist conditions * Ventilated * Dark * Manufacturers’ instructions * Strong room |
| 1. Legal requirements May include but is not limited to | * OSHA * Factories act * Employment act * EMCA 1999 * Public health cap 242 |
| 1. Security surveillance systems May include but is not limited to | * CCTV * Alarms * Clock in cards * Security guards |
| 1. High value goods May include but is not limited to | * Gold * Diamonds * High technology products * Bank notes * Jewelry |
| 1. Mitigation measures May include but is not limited to | * Insurance * Bond |

**REQUIRED KNOWLEDGE**

* Storage conditions for various goods
* Stores handling methods
* Risk assessment and management
* Control of warehouse pests
* Stores records management
* Security surveillance systems
* Stock taking
* Stock verification
* Stock utilization
* Stock control
* Stacking methods
* Storage methods

**SKILLS**

* Organizing skills
* Analytical skills
* Negotiation skills
* Interpersonal skills
* Communication skills
* Evaluation skills
* Record keeping skills
* Critical thinking
* Problem solving
* Decision making
* Risk assessment and 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:   1. Designed/laid out warehouse/store appropriately 2. Demonstrated knowledge of warehouse design and layout 3. Demonstrate ability to manage warehouse plants and equipment 4. Demonstrated ability to control pests 5. Demonstrated ability to control stock. 6. Demonstrate ability to maintain records. 7. Secured stored goods |
| 1. Resource Implications | The following resources should be provided:   1. A functional procurement unit 2. A functional procurement entity with an approved warehouse 3. Warehouse equipment |
| 1. Methods of Assessment | Competency may be assessed through:   1. Written text 2. Interview 3. Observation |
| 1. Context of Assessment | 1. Competency may be assessed on the job, 2. Off the job or a combination of these. 3. 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. |