****

**REPUBLIC OF KENYA**

**COMPETENCY BASED CURRICULUM**

**FOR**

**AIR CARGO OPERATIONS**

**LEVEL 5**



TVET CDACC

P.O. BOX 15745-00100

NAIROBI

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# FOREWORD

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

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

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

It is my conviction that this curriculum will play a great role towards development of competent human resource for the 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 on Reforming Education and Training in Kenya, emphasized the need to reform curriculum development, assessment and certification. This called for a shift to CBET to address the mismatch between skills acquired through training and skills needed by industry as well as increase the global competitiveness of Kenyan labour force.

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

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

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

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

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

**CHAIRMAN, TVET CDACC**

# ACKNOWLEDGEMENT

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

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

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

**Dr. LAWRENCE GUANTAI M’ITONGA, PhD**

**COUNCIL SECRETARY/CEO**

**TVET CDACC**

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# ACRONYMS

AC Air Cargo

LOG Logistics

BC Basic Competency

CBET Competency Based Education and Training

CDACC Curriculum Development Assessment and Certification Council

CC Core Competency

CU Curriculum

ICT Information Communication Technology

KCSE Kenya Certificate of Secondary Education

KNQA Kenya National Qualifications Authority

MoE Ministry of Education

OS Occupational Standard

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/CU/AC/BC/01/5/A

Industry or sector

Curriculum

Occupational area

Type of competency

Competency number

Competency level

Control version

#

# COURSE OVERVIEW

Air Cargo Operations Level 5 consists of competencies that an individual must achieve to perform cargo operations at the airport in effective manner and cost saving. It entails performing cargo operations, handling air cargo, carrying out airport marketing, handling special freight, providing air cargo security, performing cargo stowage and developing cargo automation.

This qualification consists of the following basic and core competencies:

**BASIC UNITS OF LEARNING**

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit of Learning Code** | **Unit of Learning Title** | **Duration in Hours**  | **Credit factor** |
| LOG/CU/AC/BC/01/5/A | Communication skills | 25 | 2.5 |
| LOG/CU/AC/BC/02/5/A | Numeracy skills | 40 | 4.0 |
| LOG/CU/AC/BC/03/5/A | Digital literacy | 45 | 4.5 |
| LOG/CU/AC/BC/04/5/A | Entrepreneurial skills | 70 | 7.0 |
| LOG/CU/AC/BC/05/5/A | Employability skills | 50 | 5.0 |
| LOG/CU/AC/BC/06/5/A | Environmental literacy | 25 | 2.5 |
| LOG/CU/AC/BC/07/5/A | Occupational safety and health practices | 25 | 2.5 |
| **TOTAL** | **280** | **28.0** |

**COMMON UNITS OF LEARNING**

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit Code** | **Unit Title** | **Duration in Hours**  | **Credit factor** |
| LOG/CU/AC/CC/01/5/A | Airport operations  | 100 | 10.0 |
| **TOTAL** | **100** | **10.0** |

**CORE UNITS OF LEARNING**

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit Code** | **Unit Title** | **Duration in Hours**  | **Credit factor** |
| LOG/CU/AC/CR/01/5/A | Cargo operations | 90 | 9.0 |
| LOG/CU/AC/CR/02/5/A | Air cargo Handling | 80 | 8.0 |
| LOG/CU/AC/CR/03/5/A | Airport marketing | 70 | 7.0 |
| LOG/CU/AC/CR/04/5/A | Special freight Handling | 50 | 5.0 |
| LOG/CU/AC/CR/05/5/A | Air cargo Security | 70 | 7.0 |
| LOG/CU/AC/CR/06/5/A | Cargo stowage  | 50 | 5.0 |
| LOG/CU/AC/CR/07/5/A | Cargo automation | 50 | 5.0 |
|  | Industrial attachment | 360 | 36.0 |
| **Total**  | **820** | **82.0** |
| **Grand total**  | **1200** | **120** |

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

The total duration of the course is 1200 hours plus 360 hours (12 weeks by 5 days per week by 8 hours per day) of field attachment.

**Field Attachment**

It is envisaged that the trainee will have undergone a field training and assessment with a recognized aviation organization. At least 360 hours (12 weeks) will be spent on a supervised and assessed field attachment.

**Entry Requirements**

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

1. Attained KCSE with mean grade of D (plain)

**Or**

1. Air cargo Operations Certificate Qualification Level 4

**Or**

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

**Assessment**

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

**Certification**

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

# BASIC UNITS OF LEARNING

# COMMUNICATION SKILLS

**UNIT CODE:**LOG/CU/AC/BC/01/5/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Demonstrate Communication Skills

**Duration of Unit:** 25hours

**Unit Description**

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

**Summary of Learning Outcomes**

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

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

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

**Suggested Methods of Instruction**

* Role playing
* Viewing of related videos

**Recommended Resources**

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

# NUMERACY SKILLS

**UNIT CODE:** LOG/CU/AC/BC/02/5/A

**Relationship to Occupational Standards:**

This unit addresses the Unit of Competency: Demonstrate Numeracy Skills

**Duration of Unit:** 40 hours

**Unit Description**

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

**Summary of Learning Outcomes**

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

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

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

**Suggested Methods of Instruction**

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

**Recommended resources**

* Calculators
* Basic measuring instruments

# DIGITAL LITERACY

**UNIT CODE:** LOG/CU/AC/BC/03/5/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Demonstrate Digital Literacy

**Duration of Unit:** 45 hours

**Unit Description**

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

**Summary of Learning Outcomes**

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

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

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

**Suggested Methods of Instruction**

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

**Recommended Resources**

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

# ENTREPRENEURIAL SKILLS

**UNIT CODE:** LOG/CU/AC/BC/04/5/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Demonstrate Entrepreneurship

**Duration of unit:** 70 hours

**Unit Description**

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

**Summary of Learning Outcomes**

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

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

**Suggested Methods of instruction**

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

**Recommended Resources**

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

# EMPLOYABILITY SKILLS

**UNIT CODE:** LOG/CU/AC/BC/05/5/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Demonstrate Employability Skills

**Duration of Unit:** 50 hours

**Unit Description**

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

**Summary of Learning Outcomes**

1. Conduct self-management

2. Demonstrate interpersonal communication

3. Demonstrate critical safe work habits

4. Lead small teams

5. Plan and organize work

6. Maintain professional growth and development

7. Demonstrate workplace learning

8. Demonstrate problem solving skills

9. Demonstrate workplace ethics

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

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

**Suggested Methods of Instruction**

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

**Recommended Resources**

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

# ENVIRONMENTAL LITERACY

**UNIT CODE:** LOG/CU/AC/BC/06/5/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Demonstrate Environmental Literacy

**Duration of Unit:** 25 hours

**Unit Description**

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

**Summary of Learning Outcomes**

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

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

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

**Suggested Methods of Instruction**

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

**Recommended Resources**

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

# OCCUPATIONAL SAFETY AND HEALTH PRACTICES

**UNIT CODE:** LOG/CU/AC/BC/07/5/A

**Relationship to Occupational Standards**

This unit addresses the unit of competency: Demonstrate occupational safety and health practices

**Duration of Unit:** 25 hours

**Unit Description**

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

**Summary of Learning Outcomes**

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

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

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

**Suggested Methods of Instruction**

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

**Recommended Resources**

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

# COMMON UNIT OF LEARNING

# AIRPORT OPERATIONS

**UNIT CODE:**LOG/CU/AC/CC/01/5/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: perform airport operations

**Duration of Unit:**100 hours

**Unit Description**

This unit specifies the competencies required to perform airport operations**.** It involves conducting airport security, performing terminal operations, undertaking emergencies control, performing navigation activities, performing air traffic control services and monitoring meteorological conditions.

**Summary of Learning Outcomes**

* 1. Conduct Airport Security
	2. Perform Terminal operations
	3. Undertake Emergencies control
	4. Perform Navigation activities
	5. Perform Air Traffic Control Services
	6. Monitor Meteorological conditions

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Conduct Airport Security
 | * Introduction to airport operations
* Introduction to airport security
* Airport security devices
* Security sensitive areas
* Airport security procedures
 | * Written tests
* Observation
* Oral questions
* Third party report
 |
| 1. Perform Terminal operations
 | * Introduction to terminal operations
* Terminal requirements
* Types of terminals
* Terminal operating procedures
* Terminal equipment
* Security measures at the terminal
 | * Written tests
* Observation
* Oral questions
* Third party report
 |
| 1. Undertake Emergencies control
 | * Introductions to emergencies
* Types of emergencies
* Aerodrome emergency plan
* Airport emergency response
* Regulatory framework
* Emergency response equipment
 | * Written tests
* Observation
* Oral questions
* Third party report
 |
| 1. Perform Navigation services
 | * Introduction to navigation
* Types of navigation
* Navigation aids
* Navigation procedures
* Aviation geography
 | * Written tests
* Observation
* Oral questions
* Third party report
 |
| 1. Perform Air Traffic Control Services
 | * Introduction to Air Traffic Services
* Types of Air Traffic Control Services
* Classification of airspaces
* ATC contingency measures
 | * Written tests
* Observation
* Oral questions
* Third party report
 |
| 1. Monitor Meteorological conditions
 | * Introduction to weather
* Weather elements
* Climatological conditions
* Meteorological hazards
* Effects of weather elements
* Contingency measures
 | * Written tests
* Observation
* Oral questions
* Third party report
 |

**Suggested Methods of Delivery**

* Demonstration by trainer
* Practice by the trainee
* Discussions
* Direct instruction
* Case study
* Audio –visual aids

**Recommended Resources**

* Radar
* Air gates
* CCTV
* X-ray machines
* VHF/HF radios
* AIS manual
* Aerodrome emergency plan

# CORE UNITS OF LEARNING

# CARGO OPERATIONS

**UNIT CODE:**LOG/CU/AC/CR/01/5/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: perform cargo operations

**Duration of Unit:**90 hours

**Unit Description**

This unit specifies the competencies required to perform cargo operations. It involves preparing cargo plan, carrying out cargo operations, performing cargo voyage, managing cargo emergencies, preventing environment pollution and maintaining cargo records.

**Summary of Learning Outcomes**

* + - 1. Preparing cargo plan
			2. Carry out cargo operations
			3. Perform cargo voyage
			4. Manage cargo emergencies
			5. Prevent environment pollution
1. Maintaining cargo records

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. preparing cargo plan
 | * Introduction to cargo operations
* Introduction to cargo planning
* Meaning of terms
* Cargo
* Plan
* Cargo plan
* Cargo properties
* Cargo plan development procedures
* Cargo plan layout
* Factors to consider in cargo plan implementation
 | * Written tests
* Observation
* Oral questions
* Third party report
* Assignments
* Workshop
* assignments
 |
| 1. Carry out cargo operations
 | * Meaning of terms
* Organization structure
* Modes of communication
* Duties and responsibilities.
* Cargo handling procedures
* Cargo handling records
 | * Written tests
* Observation
* Oral questions
* Third party report
 |
| 1. Perform cargo voyage
 | * Introduction to cargo voyage
* Tools and equipment for securing cargo
* Cargo handling procedures
* Cargo stowage and security
* Hazards associated with cargo stowage
* Cargo voyage monitoring procedures
* Cargo voyage documents
 | * Written tests
* Observation
* Oral questions
* Third party report
* Research
* assignments
 |
| 1. Manage cargo emergencies
 | * Meaning of terms
* Types of cargo emergencies
* Evacuation procedures
* Emergency equipment
* Communication equipment
* Emergency communication procedures
* Emergency procedures
 | * Written tests
* Observation
* Oral questions
* Third pa
* Research
* assignments
 |
| 1. Prevent environment pollution
 | * Meaning of terms
* Types of environmental pollution
* Causes of environmental pollution
* Prevention measures
 | * Written tests
* Observation
* Oral questions
* Third part reports
* Research
* assignments
 |
| 1. maintain cargo records
 | * Introduction to cargo records
* Format of cargo records
* Importance of cargo records.
* Preparation of cargo records.
* Storage of cargo records.
* Legal requirement
 | * Written tests
* Observation
* Oral questions
* Third party report
* Assignments
* research
 |

**Suggested Methods of Delivery**

* Demonstration
* Practice by the trainee
* Discussions
* Direct instruction
* Case study
* Audio –visual aid
* projector

**Recommended Resources**

* Tugs and tractors
* Ground power units
* Container
* Pallet
* Trucks
* Belt loaders
* Pushback tugs and tractors
* De/anti-icing vehicles
* projector

# AIR CARGO HANDLING

**UNIT CODE:**LOG/CU/AC/CR/02/5/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Handle air cargo

**Duration of Unit:**80 hours

**Unit Description**

This unit specifies the competencies required to handle air cargo**.** It involves identifying air cargo, managing cargo facilities, performing cargo loading/offloading, handling dangerous goods, processing cargo payments and performing air cargo storage

**Summary of Learning Outcomes**

1. Identify air cargo
2. Manage cargo facilities
3. Perform cargo loading /offloading
4. Handle dangerous goods
5. Process cargo payments
6. Perform cargo storage

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Identify air cargo
 | * Introduction to air cargo.
* Meaning of terms.
* Classification of air cargo.
* Packing instructions.
* Handling tools and equipment.
* Cargo handling procedures
* International and national legal requirement.
 | * Written tests
* Observation
* Oral questions
* Third party report
* Assignment
* Research
 |
| 1. Operate cargo facilities
 | * Introduction to cargo facilities
* Types cargo facilities
* Inventory records
* Cargo handling systems
* Impact of cargo facilities
* Safety procedures
 | * Written tests
* Observation
* Oral questions
* Third party report
* Assignment
* Research
 |
| 1. Perform cargo loading /offloading
 | * Introduction to cargo loading/offloading
* Meaning of terms
* Nature of the cargo
* Loading /offloading procedures
* Loading and offloading equipment
* Notifications
 | * Written tests
* Observation
* Oral questions
* Third party report
* Assignment
* Research
 |
| 1. Handle dangerous goods
 | * Classification of dangerous goods
* Marking and labelling of dangerous goods
* Preparation of dangerous goods documentation
* Packaging
* Loading/off-loading dangerous goods
* Safety measures
 | * Written tests
* Observation
* Oral questions
* Third party report
* Assignment
* Research
* Workshop
 |
| 1. Process cargo payments
 | * Meaning of terms
* Air cargo tariff
* Chargeable weight.
* Currencies.
* Rate and charges.
* Invoice processing
 | * Written tests
* Observation
* Oral questions
* Third party report
* Assignment
* Research
 |
| 1. Perform cargo storage
 | * Introduction to cargo storage
* Storage tools and equipment
* Storage resources
* Methods of storage
* Types of warehouses
* Warehousing procedures
* Storage charges
* Custom formalities
 | * Written tests
* Observation
* Oral questions
* Third party report
* Assignment
* Research
 |

**Suggested Methods of Delivery**

* Demonstration by trainer
* Practice by the trainee
* Discussions
* Direct instruction
* Case study
* Audio –visual aids
* Projector

**Recommended Resources**

* Tugs and tractors
* Ground power units
* Container
* Pallet
* Trucks
* Air starter units
* Belt loaders
* Pushback tugs and tractors
* De/anti-icing vehicles
* Warehouses
* Projectors

# AIRLINE MARKETING

**UNIT CODE:**LOG/CU/AC/CR/03/5/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: carry out airline marketing

**Duration of Unit:**70 hours

**Unit Description**

This unit specifies the competencies required to **carry out airline marketing**. It involves identifying air market segment, understanding freight rate, carrying out air market promotion, determining freight pricing and performing customer service

**Summary of Learning Outcomes**

1. Identify air market segment
2. Understand freight rate
3. Carry out air market promotion
4. Determine freight pricing.
5. Perform Customer Service

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Identify air market segment
 | * Introduction to airline marketing
* Marketing goals and objectives are identified
* Marketing plan
* Importance of market segmentation
* Factors considered in segmentation
* Types of market segmentation
 | * Written tests
* Observation
* Oral questions
* Third party report
* Assignment
* Research
* Workshop
 |
| 1. Determine freight rate
 | * Meaning of terms
* Factors considered in determining freight rates
* Marketing methods used
* Pricing objectives
* Government and legal regulations
* Competition in the market
* The utility and demand
* The product cost
 | * Written tests
* Observation
* Oral questions
* Third party
* Report
* Assignment
* Research
 |
| 1. Carry out air market promotion
 | * Meaning of the terms.
* Promotional objectives.
* Promotional strategies.
* Promotional methods.
* Importance of promotion.
* Role of promotion.
* Types of promotion.
 | * Written tests
* Observation
* Oral questions
* Third party report
* Assignment
* Research
 |
| 1. Determine freight pricing.
 | * Meaning of terms.
* Factors consider when pricing.
* Methods of pricing.
* Role pricing.
* Airport taxes fees and charges.
 | * Written tests
* Observation
* Oral questions
* Third party report
* Research
* Assignment
 |
| 1. Perform Customer Care
 | * Meaning of terms.
* Categorize customer
* Customer needs
* Customer service
* Customer records
 | * Written tests
* Observation
* Oral questions
* Third party report
* Assignment
* Research
 |

**Suggested Methods of Delivery**

* Demonstration by trainer
* Practice by the trainee
* Discussions
* Direct instruction
* Case study
* Audio –visual aids
* Projector

**Recommended Resources**

* Banners
* Online marketing
* Video animations
* Print media
* Projectors

# SPECIAL FREIGHT HANDLING

**UNIT CODE:**LOG/CU/AC/CR/04/5/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Handle special freight

**Duration of Unit:**50 hours

**Unit Description**

This unit specifies the competencies required to handle special freight. It involves identifying special freight, monitoring special freight and maintaining special freight Documentation

**Summary of Learning Outcomes**

1. Identify special freight

2. Monitor special freight

3. Maintain special freight Documentation

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Identify special freight
 | * Introduction to special freight.
* Features of special freight.
* Categories of special freight.
* Regulations governing special freight.
* Mode of packaging.
* Terms and conditions.
* Limitations of liabilities.
* Warehousing facility for special freight
* Transport services
* Documentation of special freight
 | * Written tests
* Observation
* Oral questions
* Third party report
* Assignment
* Research
 |
| 1. Monitor special freight
 | * Introduction to monitoring special cargo
* Cargo monitoring devices
* Transit of special cargo
* Transport challenges for special cargo
* Safety measures
* Communication
 | * Written tests
* Observation
* Oral questions
* Third party report
* Assignment
* Research
 |
| 1. Maintain special freight Documentation
 | * Introduction to special freight records.
* Types of special freight records
* Special freight records preparations.
* Methods of records keeping
 | * Written tests
* Observation
* Oral questions
* Third party report
* Research
* Assignment
 |

**Suggested Methods of Delivery**

* Demonstration by trainer
* Practice by the trainee
* Discussions
* Direct instruction
* Case study
* Audio –visual aids
* Projector

**Recommended Resources**

* Tugs and tractors
* Ground power units
* Container
* Pallet
* Trucks
* GPS tracking system
* Belt loaders
* De/anti-icing vehicles
* Copies of special freight documents
* Copies of special freight insurance certificate

# AIR CARGO SECURITY

**UNIT CODE:**LOG/CU/AC/CR/05/5/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: provide air cargo security

**Duration of Unit:**70 hours

**Unit Description**

This unit specifies the competencies required to secure air cargo. It involves preparing cargo packaging, managing lashing/unlashing of cargo, protecting cargo from adverse weather, managing cargo packing/unpacking, securing valuable/general cargo and managing perishable cargo

**Summary of Learning Outcomes**

1. Prepare cargo packaging
2. Manage Lashing /unlashing of cargo
3. Protect cargo from adverse weather
4. Manage cargo Packing/unpacking
5. Secure valuable/general cargo
6. Manage perishable cargo

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Prepare cargo containers
 | * Terms and meaning
* Introduction to Unit Loading devices.
* Container sizes and dimensions
* Cargo container Packaging materials.
 | * Written tests
* Observation
* Oral questions
* Third party report
* Assignment
* Research
 |
| 1. Manage Lashing/unlashing of cargo
 | * Introduction to lashing
* Methods of lashing
* Tie-down requirements
* Lashing/unlashing equipment and tools.
* Lashing/unlashing Procedures
 | * Written tests
* Observation
* Oral questions
* Third party report
* Assignment
* Research
 |
| 1. Protect cargo from adverse weather
 | * Introduction to weather elements
* Weather hazards
* Mitigation of effects of weather hazards
* Uses of protective devices.
 | * Written tests
* Observation
* Oral questions
* Third party report
* Assignment
* Research
 |
| 1. Manage cargo Packing/unpacking
 | * Introduction to packing.
* Methods of cargo packing.
* Packaging cargo materials.
* Importance of packaging and unpacking.
* Procedures for packing and unpacking.
* Factors to consider when selecting packaging materials.
 | * Written tests
* Observation
* Oral questions
* Third party report
* Assignment
* Research
 |
| 1. Secure valuable/general cargo
 | * Introduction to cargo.
* Types of valuable/general cargo.
* Procedure for receiving/dispatching valuable/general cargo.
* Procedure of packing/unpacking valuable/general cargo.
* Safety measures
* Methods of storing cargo.
* Risks and challenges of handling valuable/general cargo.
* Documentation
* Records
 | * Written tests
* Observation
* Oral questions
* Third party report
* Assignment
* Research
 |
| 1. Manage perishable cargo
 | * Introduction to Perishable cargo.
* Methods of handling perishable cargo.
* Procedures of storage, packing/unpacking perishable cargo.
* Challenges of handling perishable cargo.
* Equipment and tools of handling perishable cargo.
* Documentation
* Records
 | * Written tests
* Observation
* Oral questions
* Third party report
* Assignment
* Research
 |

**Suggested Methods of Delivery**

* Demonstration by trainer
* Practice by the trainee
* Discussions
* Direct instruction
* Case study
* Audio –visual aids
* Projector

**Recommended Resources**

* Cold rooms
* High strength nylon and Polyester straps
* Buckles
* Cargo covers
* Tugs and tractors
* Ground power units
* Container
* Pallet
* Trucks
* Belt loaders
* Pushback tugs and tractors

# CARGO STOWAGE

**UNIT CODE:**LOG/CU/AC/CR/06/5/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: perform cargo stowage

**Duration of Unit:**50 hours

**Unit Description**

This unit specifies the competencies required to **perform cargo stowage.** It involves observing cargo plan, preparing cargo loading/offloading, monitoring loading/ unloading of cargo and monitoring cargo voyage

**Summary of Learning Outcomes**

1. Observe cargo plan
2. Prepare cargo loading/offloading
3. Monitor loading/ unloading of cargo
4. Monitor cargo voyage

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Observe cargo plan
 | * Terms and meaning
* Introduction to cargo stowage
* Elements of cargo stowage
* Types of freight
* Interpretation of cargo plan
* Rules and regulations
 | * Written tests
* Observation
* Oral questions
* Third party report
* Assignment
* Research
 |
| 1. Prepare cargo loading/off loading
 | * Cargo descriptions
* Cargo loading/offloading techniques
* Cargo loading/offloading equipment
* Safety measures
 | * Written tests
* Observation
* Oral questions
* Third party report
* Assignment
* Research
 |
| 1. Monitor loading/ offloading of cargo
 | * Meaning of terms
* Methods of loading/ off loading
* Information exchange on cargo loading/ off loading and planning
* Process of loading and securing cargo
 | * Written tests
* Observation
* Oral questions
* Third party report
* Assignment
* Research
 |
| 1. Monitor cargo voyage
 | * Introduction to cargo voyage
* Voyage policies
* Cargo voyage plan
* Monitoring systems
* Emerging issues
* Records
 | * Written tests
* Observation
* Oral questions
* Third party report
* Research
* Assignment
 |

**Suggested Methods of Delivery**

* Demonstration by trainer
* Practice by the trainee
* Discussions
* Direct instruction
* Case study
* Audio –visual aids

**Recommended Resources**

* Tugs and tractors
* Container
* Pallet
* Trucks
* Belt loaders

# CARGO AUTOMATION

**UNIT CODE:**LOG/CU/AC/CR/07/5/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: develop cargo automation

**Duration of Unit:**50 hours

**Unit Description**

This unit specifies the competencies required to develop cargo automation. It involves administering cargo automation, handling cargo automation, and processing cargo automation.

**Summary of Learning Outcomes**

1. Administer cargo automation
2. Handle cargo automation
3. Process cargo automation

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Administer cargo automation
 | * Terms and meaning
* Introduction to cargo automation
* Automation Manuals
* Cargo automation systems
* Automation within aviation industry
 | * Written tests
* Observation
* Oral questions
* Third party report
* Assignment
* Research
 |
| 1. Handle cargo automation
 | * Automation system performance
* Elements of air cargo automation
* Cargo handling facilities and equipment
 | * Written tests
* Observation
* Oral questions
* Third party report
* Assignment
* Research
 |
| 1. Process cargo automation
 | * Cargo automation requirements
* Cargo automation procedures
* Back Up cargo automation system
 | * Written tests
* Observation
* Oral questions
* Third party report
* Assignment
* Research
 |

**Suggested Methods of Delivery**

* Project
* Demonstration by trainer
* Practice by the trainee
* Discussions
* Direct instruction
* Case study
* Audio –visual aids

**Recommended Resources**

* Belt loaders
* Retrieval systems
* System manuals