

**REPUBLIC OF KENYA**

**COMPETENCY BASED CURRICULUM**

**FOR**

**MARITIME TRANSPORT AND LOGISTICS**

**LEVEL 6**



TVET CDACC

P.O. BOX 15745-00100

NAIROBI

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# FOREWORD

The provision of quality education and training is fundamental to the Government’s overall strategy for social economic development. Quality education and training will contribute to achievement of Kenya’s development blueprint 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 (Sectional 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 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 building and construction sector.

**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 Sectional Paper No. 4 of 2016 on Reforming Education and Training in Kenya, emphasized the need to reform curriculum development, assessment and certification. This called for a shift to CBET in order to address the mismatch between skills acquired through training and skills needed by industry as well as increase the global competitiveness of Kenyan labour force.

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

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

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

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

**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 Maritime Transport and Logistics Sector Skills Advisory Committee (SSAC) members for their contribution to the development of this curriculum.

I also thank all stakeholders in the Maritime Transport and Logistics 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 building and construction acquire competencies that will enable them to perform their work more efficiently.

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

**COUNCIL SECRETARY/CEO**

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# ACRONYMS

CBET Competency Based Education and Training

CDACC Curriculum Development Assessment and Certification Council

CU Curriculum

OSHA Occupation Safety and Health Act

PPE Personal Protective Equipment

SSAC Sector Skills Advisory Committee

LOG Logistics

MTL Maritime Transport and Logistics

BC Basic Competency

CC Common Competency

CR Core Competency

# KEY TO UNIT CODE

 LOG /CU/MTL/BC/01/6/A

Industry or sector

Occupational Standards

Occupational area

Type of competency

Competency number

Competency level

Version control

# COURSE OVERVIEW

1. **Brief description of the course:**

Maritime Transport and Logistics Level 6 qualification constis of competencies that a person must achieve to enable him/her to be certified as a Maritime Transport and Logistics Technician. It entails managing port operations, processing marine insurance, performing cargo and terminal operations, performing container operation duties, managing shipping business, carrying out shipbroking and chartering, performing multi-modal transport operations and performing clearing and forwarding operations.

The present curriculum consists of the following units of competencies:

* **Basic Units of Learning:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit of Learning Code** | **Unit of Learning Title** | **Duration in Hours** | **Credit Factor** |
| LOG/CU/MTL/BC/01/6/A | Communication Skills | 40 | 4 |
| LOG/CU/MTL/BC/02/6/A | Numeracy skills | 60 | 6 |
| LOG/CU/MTL/BC/03/6/A | Digital Literacy | 60 | 6 |
| LOG/CU/MTL/BC/04/6/A | Entrepreneurial Skills | 100 | 10 |
| LOG/CU/MTL/BC/05/6/A | Employability Skills | 80 | 8 |
| LOG/CU/MTL/BC/06/6/A | Environmental literacy | 40 | 4 |
| LOG/CU/MTL/BC/07/6/A | Occupational Safety and Health Practices | 40 | 4 |
| **TOTAL NUMBER OF HOURS** | **420** | **42** |

**Core Units of Learning:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit of Learning Code** | **Unit of Learning Title** | **Duration in Hours** | **Credit Factor** |
| LOG/CU/MTL/CR/01/6/A | Port Operations Management | 280 | 28 |
| LOG/CU/MTL/CR/02/6/A | Marine Insurance | 180 | 18 |
| LOG/CU/MTL/CR/03/6/A | Cargo and terminal Operations | 380 | 38 |
| LOG/CU/MTL/CR/04/6/A | Container operation Duties | 380 | 38 |
| LOG/CU/MTL/CR/05/6/A | Shipping Business Management | 300 | 30 |
| LOG/CU/MTL/CR/06/6/A | Shipbroking and Chartering | 220 | 22 |
| LOG/CU/MTL/CR/07/6/A | Multi-modal Transport Operations | 300 | 30 |
| LOG/CU/MTL/CR/08/6/A | Clearing and Forwarding | 300 | 30 |
|  | Industrial Attachment | 480 | 48 |
| **Total** | **2820** | **282** |
| **Grand Total** | **3240** | **324** |

1. **Entry Requirements**

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

1. Certificate/diploma/higher diploma (KNEC) in Maritime Transport and Logistics

**Or**

1. Kenya Certificate of Secondary Education (KCSE grade C-)

**Or**

1. Equivalent qualifications as determined by Kenya National Qualifications Authority (KNQA)
2. **Provision for Industrial attachment**

It is envisaged that the trainee will undergo an industrial attachment training and assessment with a recognised construction services provider as a prerequisite for completion of this training course.

1. **Attachment/Internship:**

Attachment (Internship) is an opportunity for a learner to integrate career related experience by participating in planned, supervised work. This curriculum anticipates at least 480 hours of attachment as integral part of the training. In addition, the training comprises practical learning activities (estimated to be >60% of the time) which are meant to reinforce trainees’ smooth access to employment or self-employment.

1. **Assessment**

Assessment is the process of gathering and judging evidence in order to decide whether a person has attained a standard of performance. The course will be assessed at two levels:

* Internal assessment is continuous and is conducted by the trainer who is monitored by an internal accredited verifier
* External assessment is the responsibility of TVET CDACC
1. **Certification**

On successful completion of a unit of learning, a trainee will be issued with a Certificate of competence and on successful completion of all units of competency a trainee will be awarded a National Certified Maritime Transport and Logistics Technician qualification. These certificates will be issued by TVET CDACC in conjunction with training provider

# BASIC UNITS OF LEARNING

# COMMUNICATION SKILLS

**UNIT CODE:** LOG/OS/MTL/BC/01/6/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Demonstrate Communication Skills

**Duration of Unit:** 40 hours

**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.

**Summary of Learning Outcomes**

1. Meet communication needs of clients and colleagues
2. Develop communication strategies
3. Establish and maintain communication pathways
4. Promote use of communication strategies
5. Conduct interview
6. Facilitate group discussion
7. 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
* Types of communication strategies
* Elements of communication strategy
 | * Interview
* Written texts
 |
| 1. Develop communication strategies
 | * Dynamics of groups
* Styles of group leadership
* Openness and flexibility in communication
* Communication skills relevant to client groups
 | * Interview
* Written texts
 |
| 1. Establish and maintain communication pathways
 | * Types of communication pathways
 | * Interview
* Written texts
 |
| 1. Promote use of communication strategies
 | * Application of elements of communication strategies
* Effective communication techniques
 | * Interview
* Written texts
 |
| 1. Conduct interview
 | * Types of interview
* Establishing rapport
* Facilitating resolution of issues
* Developing action plans
 | * Interview
* Written texts
 |
| 1. Facilitate group discussion
 | * Identification of communication needs
* Dynamics of groups
* Styles of group leadership
* Presentation of information
* Encouraging group members participation
* Evaluating group communication strategies
 | * Interview
* Written texts
 |
| 1. Represent the organization
 | * Presentation techniques
* Development of a presentation
* Multi-media utilization in presentation
* Communication skills relevant to client groups
 | * Interview
* Written texts
 |

**Suggested Methods of Instruction**

* Discussion
* Role playing
* Simulation
* Direct instruction

**Recommended Resources**

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

# NUMERACY SKILLS

**UNIT CODE:** LOG/OS/MTL/BC/02/6/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Demonstrate Numeracy Skills.

**Duration of Unit:** 60 hours

**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.

**Summary of Learning Outcomes**

1. Apply a wide range of mathematical calculations for work
2. Apply ratios, rates and proportions to solve problems
3. Estimate, measure and calculate measurement for work
4. Use detailed maps to plan travel routes for work
5. Use geometry to draw and construct 2D and 3D shapes for work
6. Collect, organize and interpret statistical data
7. Use routine formula and algebraic expressions for work
8. Use common functions of a scientific calculator

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Apply a wide range of mathematical calculations for work
 | * Fundamentals of mathematics
* Addition, subtraction, multiplication and division of positive and negative numbers
* Algebraic expressions manipulation
* Forms of fractions, decimals and percentages
* Expression of numbers as powers and roots
 | * Written tests
* Assignments
* Supervised exercises
 |
| 1. Apply ratios, rates and proportions to solve problems
 | * Rates, ratios and proportions
* Meaning
* Conversions into percentages
* Direct and inverse proportions determination
* Performing calculations
* Construction of graphs, charts and tables
* Recording of information
 | * Written tests
* Assignments
* Supervised exercises
 |
| 1. Estimate, measure and calculate measurement for work
 | * Units of measurements and their symbols
* Identification and selection of measuring equipment
* Conversion of units of measurement
* Perimeters of regular figures
* Areas of regular figures
* Volumes of regular figures
* Carrying out measurements
* Recording of information
 | * Assignments
* Supervised exercises
* Written tests
 |
| 1. Use detailed maps to plan travel routes 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
* Planning of routes
* Calculation of distance, speed and time
 | * Written
* Practical test
 |
| 1. Use geometry to 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
* Evaluation of unknown angles
* Use formal and informal mathematical language to describe and compare common angles
* Symmetry and similarity
* Use common geometric instruments to draw two dimensional shapes
* Construct routine three dimensional objects from given nets
 |  |
| 1. Collect, organize and interpret statistical data
 | * + Classification of data
* Grouped data
* Ungrouped data
	+ Data collection
* Observation
* Recording
	+ Distinguishing between sampling and census
	+ Importance of sampling
	+ Errors in sampling
	+ Types of sampling and their limitations e.g.
* Stratified random
* Cluster
* Judgmental
	+ Tabulation of data
* Class intervals
* Class boundaries
* Frequency tables
* Cumulative frequency
	+ Diagrammatic and graphical presentation of data e.g.
* Histograms
* Frequency polygons
* Bar charts
* Pie charts
* Cumulative frequency curves
	+ Interpretation of data
 | * Assignments
* Supervised exercises
* Written tests
 |
| 1. Use routine formula and algebraic expressions for work
 | * + Solving linear equations
	+ Linear graphs
* Plotting
* Interpretation
* Applications of linear graphs
* Curves of first and second degree
* Plotting
* Interpretation
 | * Assignments
* Supervised exercises
* Written tests
 |
| 8. Use common functions of a scientific calculator | * Identify and use keys for common 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
 | * Written
* Practical test
 |

**Suggested Methods of Instruction**

* Group discussions
* Demonstration by trainer
* Practical work by trainee
* Exercises

**Recommended Resources**

* Calculators
* Rulers, pencils, erasers
* Charts with presentations of data
* Graph books
* Dice

# DIGITAL LITERACY

**UNIT CODE:** LOG/OS/MTL/BC/03/6/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Demonstrate Digital Literacy

**Duration of Unit:** 60 hours

**Unit Description**

This unit describes competencies required to demonstrate digital literacy. It involves in identifying computer software and hardware, applying security measures to data, hardware, software in automated environment, computer software in solving task, internet and email in communication at workplace, desktop publishing in official assignments 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
 |
| 1. Apply security measures to data, hardware, software in automated environment
 | * 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
* 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
* Project
 |
| 1. Apply internet and email in communication at workplace
 | * Computer networks
* Network configurations
* Uses of internet
* Electronic mail (e-mail) concept
 | * Oral questioning
* 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
* 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
* Written report
* Project
 |

**Suggested Methods of Instruction**

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

**Recommended Resources**

* Computers
* Printers
* Storage devices
* Internet access

# ENTREPRENEURIAL SKILLS

**UNIT CODE:** LOG/OS/MTL/BC/04/6/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Demonstrate Entrepreneurial Skills

**Duration of unit:** 100 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 who an entrepreneur
	2. Demonstrate knowledge of entrepreneurship and self-employment
	3. Identify entrepreneurship opportunities
	4. Create entrepreneurial awareness
	5. Apply entrepreneurial motivation
	6. Develop business innovative 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
 |
| 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/OS/MTL/BC/05/6/A

**Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Demonstrate Employability Skills

**Duration of Unit:** 80 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 ethical performance.

**Summary of Learning Outcomes**

1. Conduct self-management
2. Demonstrate interpersonal communication
3. Demonstrate critical safe work habits
4. Lead a workplace team
5. Plan and organize work
6. Maintain professional growth and development
7. Demonstrate workplace learning
8. Demonstrate problem solving skills
9. Manage ethical performance

**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
* Managing emotions
* Emotional intelligence
* Assertiveness versus aggressiveness
* Expressing personal thoughts, feelings and beliefs
* Developing and maintaining high self-esteem
* Developing and maintaining positive self-image
* Setting performance targets
* Monitoring and evaluating performance
* Articulating ideas and aspirations
* Accountability and responsibility
* Good work habits
* Self-awareness
* Values and beliefs
* Self-development
* Financial literacy
* Healthy lifestyle practices
* Adopting safety 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
* Public speaking
* Writing skills
* Negotiation skills
* Reading skills
* Meaning of empathy
* Understanding customers’ needs
* Establishing communication networks
* Assertiveness
* Sharing information
 | * Written tests
* Oral questioning
* Interviewing
* Portfolio of evidence
* Third party report
 |
| 1. Demonstrate critical safe work habits
 | * Stress and stress management
* Time concept
* Punctuality and time consciousness
* Leisure
* Integratingpersonal objectives into organizational objectives
* Resources mobilization
* Resources utilization
* Setting work priorities
* Developing healthy relationships
* HIV and AIDS
* Drug and substance abuse
* Managing emerging issues
 | * Written tests
* Oral questioning
* Interviewing
* Portfolio of evidence
* Third party report
 |
| 1. Lead a workplace team
 | * Leadership qualities
* Power and authority
* Team building
* Determination of team roles and objectives
* Team parameters and relationships
* Individual responsibilities in a team
* Forms of communication
* Complementing team activities
* Gender and gender mainstreaming
* Human rights
* Developing healthy relationships
* Maintaining relationships
* Conflicts and conflict resolution
* Coaching and mentoring skills
 | * 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 concept
* Task allocation
* Developing work plans
* Developing work goals/objectives and deliverables
* Monitoring work activities
* Evaluating work activities
* Resource mobilization
* Resource allocation
* Resource utilization
* Proactive planning
* Risk evaluation
* Problem solving
* Collecting, analysing and organising information
* Negotiation
 | * Written tests
* Oral questioning
* Interviewing
* Portfolio of evidence
* Third party report
 |
| 1. Maintain professional growth and development
 | * Avenues for professional growth
* Training and career opportunities
* Assessing training needs
* Mobilizing training resources
* Licenses and certifications for professional growth and development
* Pursuing personal and organizational goals
* Managing work priorities and commitments
* Recognizing career advancement
 | * Written tests
* Oral questioning
* Interviewing
* Portfolio of evidence
* Third party report
 |
| 1. Demonstrate workplace learning
 | * Managing own learning
* Mentoring
* Coaching
* Contributing to the learning community at the workplace
* Cultural aspects of work
* Networking
* Variety of learning context
* Application of learning
* Safe use of technology
* Taking initiative/proactivity
* Flexibility
* Identifying opportunities
* Generating new ideas
* Workplace innovation
* Performance improvement
* Managing emerging issues
* Future trends and concerns in learning
 | * Written tests
* Oral questioning
* Interviewing
* Portfolio of evidence
* Third party report
 |
| 1. Demonstrate problem solving skills
 | * Critical thinking process
* Data analysis tools
* Decision making
* Creative thinking
* Development of creative, innovative and practical solutions
* Independence in identifying and solving problems
* Solving problems in teams
* Application of problem-solving strategies
* Testing assumptions
* Resolving customer concerns
 | * Written tests
* Oral questioning
* Interviewing
* Portfolio of evidence
* Third party report
 |
| 1. Manage ethical performance
 | * Meaning of ethics
* Ethical perspectives
* Principles of ethics
* 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
* Group Discussion
* Presentations
* Assignments
* Q&A

**Recommended Resources**

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

# ENVIRONMENTAL LITERACY

**UNIT CODE**:LOG/OS/MTL/BC/06/6/A

**Relationship to Occupational Standards**:

This unit addresses the Unit of Competency : Demonstrate Environmental Literacy

**Duration of Unit:** 40 hours

**Unit Description**

This unit describes the competencies required demonstrate environmental literacy.it involves controlling environmental hazard, controlling 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, monitoring activities on environmental protection/programs, analysing resource use and developing resource conservation plans.

**Summary of Learning Outcomes**

1. Control environmental hazard
2. Control environmental Pollution
3. Demonstrate sustainable resource use
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
8. Analyze resource use
9. Develop resource conservation plans

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** |  **Content** | **Suggested Assessment Methods** |
| 1. Control environmental hazard
 | * Purposes and content of Environmental Management and Coordination Act 1999
* 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 questions
* Oral questions
 |
| 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 questions
* Oral questions
* Role play
 |
| 1. Demonstrate sustainable resource use
 | * Types of resources
* Techniques in measuring current usage of resources
* Calculating current usage of resources
* Methods for minimizing wastage
* Waste management procedures
* Principles of 3Rs (Reduce, Reuse, Recycle)
* Methods for economizing or reducing resource consumption
 | * Written questions
* Oral questions
* Role play
 |
| 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 questions
* Oral questions
* Role play
 |
| 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
 |
| 1. Implement specific environmental programs
 | * Community needs and expectations
* Resource availability
* 5s of good housekeeping
* Identification of programs/Activities
* Setting of individual roles /responsibilities
* Resolving problems /constraints encountered
* Consultation with stakeholders
 | * Written questions
* Oral questions
* Role play
 |
| 1. Monitor activities on Environmental protection/Programs
 | * Periodic monitoring and Evaluation of activities
* Gathering feedback from stakeholders
* Analyzing 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
 |
| 1. Analyze resource use
 | * Identification of resource consuming processes
* Determination of quantity and nature of resource consumed
* Analysis of resource flow through different parts of the process.
* Classification of wastes for possible source of resources.
 | * Written tests
* Oral questions
* Practical test
 |
| 1. Develop resource Conservation plans
 | * Determination of efficiency of use/conversion of resources
* Causes of low efficiency of use of resources
* Plans for increasing the efficiency of resource use
 | * Written tests
* Oral questions
* Practical test
 |

**Suggested Methods of Instruction**

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

**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
* Company environmental management systems (EMS)
* Montreal Protocol
* Kyoto Protocol

# OCCUPATIONAL SAFETY AND HEALTH PRACTICES

**UNIT CODE:** LOG/OS/MTL/BC/07/6/A

**Relationship to Occupational Standards**

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

**Duration of Unit:** 40 hours

**Unit Description**

This unit specifies the competencies required to demonstrate occupational health and safety practices. It involves identifying workplace hazards and risk, identifying and implementing appropriate control measures to hazards and risks and implementing 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
* Gathering of OSH issues and/or concerns
 | * Oral questions
* Written tests
* Portfolio of evidence
* Third party report
 |
| 1. Control OSH hazards
 | * Prevention and control measures e.g. use of PPE
* Risk assessment
* Contingency measures
 | * Oral questions
* Written tests
* Portfolio of evidence
* Third party report
 |
| 1. Implement OSH

 programs | * Company OSH program, evaluation and review
* Implementation of OSH programs
* 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

# CORE UNITS OF LEARNING

# PORT OPERATIONS MANAGEMENT

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

**Relationship to Occupational Standards**

This unit addresses the unit of competency: manage port operations

**Duration of Unit:** 280 hours

**Unit Description**

This unit describes competencies required to manage port operations. It involves marketing a port, determining port charges and dues, conserving port environments, carrying out port planning, managing ship and cargo logistics, enhancing port safety and security and managing stakeholders activities.

**Summary of Learning Outcomes**

1. Market a port
2. Determine port charges and dues
3. Conserve port environment
4. Carry out port planning
5. Manage ship and cargo logistics
6. Enhance port safety and security
7. Manage stakeholders’ activities

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Market a Port
 | * Definition of terms
* Development of marketing strategies
	+ Location
	+ Security
	+ Capacity
* Development of marketing plans
* Implementation of marketing plans
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Determine port charges and dues
 | * Definition of terms
* Calculation of marine services
* Calculation of ship dues
* Calculation of stevedoring charges
* Calculation of shore handling charges, wharfage and storage charges
* Calculation of miscellaneous charges
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Conserve port environment
 | * Definition of terms
* Identification of activities that affect port environment
* Environmental Impact Assessment
* Identification of environmental policies and guidelines
* Development of environmental management tools
* Application of environmental management practices
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Carry out port planning
 | * Definition of port planning
* Identification of port objectives
* SWOT analysis
	+ Strengths
	+ Weaknesses
	+ Opportunities
	+ Threats
* Development of port plan strategies
* Carrying out baseline survey
* Development of port plan
	+ Infrastructure and superstructure plan
	+ Resource plan
	+ Port layout
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Manage ship and cargo logistics
 | * Logistics documents
	+ Identification
	+ Preparation
	+ Processing
* Preparation of ship plans
* Preparation of cargo plans
* Handling of ships
* Handling of cargo
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Enhance port safety and security
 | * Definition of terms
	+ Port safety
	+ Port security
* OSH Act 2007
* International Safety Management (ISM) Code
* International Ship and Port facility Security (ISPS) Code
* Development of safety management policy
* Development of security management policy
* Implementation of safety and security management policies
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Manage stakeholders’ activities
 | * Port Community Charter
* Identification of stakeholders
* Stakeholder consultative meetings
	+ Weekly meetings
	+ Ad-hoc meetings
* Planning of daily ship operations
 | * Written tests
* Oral
* Practical/Projects
 |

**Suggested Delivery Methods**

* Demonstration by trainer
* Practical work by trainee
* Demonstration videos
* Projects
* Group discussions
* Simulations
* Field trips

**Recommended Resources**

* Kenya Ports Authority Tariff
* Computers
* Stationery
* Environmental policies and guidelines
* International Maritime Dangerous Goods (IMDG) Code
* ISPS and ISM codes
* PPE

# MARINE INSURANCE

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

**Relationship to Occupational Standards**

This unit addresses the unit of competency: process marine insurance

**Duration of Unit:** 180 hours

**Unit Description**

This unit describes competencies required to process marine insurance. It involves segmenting marine insurance market, processing marine insurance claims, processing marine insurance cover, discharging marine insurance contract and processing marine hull and machinery claims

**Summary of Learning Outcomes**

1. Segment marine insurance market
2. Process marine insurance claims
3. Process marine insurance cover
4. Discharge marine insurance contract
5. Process marine hull and machinery claims

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Segment marine insurance market
 | * Definition of terms
	+ Segmentation
* Identification of service characteristics
* Identification of marine insurance market segments
* Marine insurance clusters
	+ Security
	+ Cargo
	+ Ship
	+ Loss of earnings
	+ Third party
* Selection of target segments
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Process marine insurance claims
 | * Acquisition of claimant information
* Claim investigation
	+ Parties involved in claim investigation
	+ Documents involved in claim investigation
* Determination of loss or damage
	+ Claimant insurance policy review
	+ Identification of items covered by insurance policy
	+ Evaluation of loss or damage
* Claim settlement
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Process marine insurance cover
 | * Identification of marine declaration form/requisition form
* Submission of declaration/requisition form
* Evaluation of insurable risks
* Determination of premium rate
* Payment of insurance premium based on segments
* Cover notes
	+ Definition
	+ Issuance process
* Preparation of marine insurance policy
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Discharge marine insurance contract
 | * Definition of terms
	+ Marine insurance contract discharge
* Circumstances warranting discharge of marine insurance contracts
	+ Discharge by performance
	+ Discharge by substituted agreement
	+ Discharge by lapse of time
	+ Discharge by operation of law
	+ Discharge by impossibility of performance
	+ Discharge by accord and satisfaction
	+ Discharge by breach
* Discharging marine insurance contracts
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Process marine hull and machinery claims
 | * Definition of terms
	+ Hull and Machinery (H&M)
* Process Hull and Machinery claims
* Determination of loss or damage
	+ Claimant insurance policy review
	+ Identification of items covered by insurance policy
	+ Evaluation of loss or damage
* Claim settlement
 | * Written tests
* Oral
* Practical/Projects
 |

**Suggested Delivery Methods**

* Demonstration by trainer
* Practical work by trainee
* Demonstration videos
* Projects
* Group discussions

**Recommended Resources**

* Marine Insurance Act
* Simulated workplace environment
* Computer
* Computer software
* Stationery
* Sample documents
* Hague Rules/Hamburg Rules
* List of ship underwriters

# CARGO AND TERMINAL OPERATIONS

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

**Relationship to Occupational Standards**

This unit addresses the unit of competency: perform cargo and terminal operations

**Duration of Unit:** 380 hours

**Unit Description**

This unit decribes competencies required to perform cargo and terminal operations. It involves developing cargo plan, performing cargo handling, managing cargo inventory, monitoring loading/offloading operations, optimising allocation of equipment and monitoring gate operations.

**Summary of Learning Outcomes**

1. Develop cargo plan
2. Perform cargo handling (loading)
3. Manage cargo inventory
4. Monitor loading/offloading
5. Optimise allocation of equipment
6. Monitor gate operations

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Develop cargo plan
 | * Definition of terms
	+ Cargo plan
* Identification of cargo characteristics
* Cargo impact on safety
* Cargo impact on the environment
* Cargo impact on vessel operations
* Communication with terminal personnel
	+ Modes of communication
* Loading and unloading arrangement
* Preparation of cargo plans
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Perform cargo handling (loading)
 | * Cargo manifests
	+ Salient features of cargo manifests
* Development of loading plans
* Ship stability assessment
* Definition of cargo stowage
* Preparation of cargo stowage in the ship
* Cargo loading process
	+ Bulk
	+ General
	+ Specials
* Cargo super intendency
* Administration of cargo documents
* Monitoring vessel sea worthiness
	+ Draught
	+ Trim
	+ Stability
	+ Cargo securing
* Receiving damaged cargo onboard
* Stowing cargo onboard
* Dispatch of cargo documents
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Manage cargo inventory
 | * Definition of terms
	+ Cargo inventory management
* Development of inventory management policy
* Categorization of inventory
* Automated inventory systems
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Monitor loading/offloading operations
 | * Stock balancing
* Loading and offloading documents
	+ Identification
	+ Preparation
* Development of loading plans
* Development of offloading plans
* Handling cargo
	+ Loading
	+ Offloading
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Optimise allocation of equipment
 | * Identification of cargo handling equipment
	+ Lifting
	+ Transfer
* Preparation of operation plans
* Allocation of equipment
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Monitor gate operations
 | * Gate operations documents
	+ Identification
	+ Preparation
* Development of gate operations documents
* Cargo verification
* Cargo inspection
 | * Written tests
* Oral
* Practical/Projects
 |

**Suggested Delivery Methods**

* Demonstration by trainer
* Practical work by trainee
* Demonstration videos
* Projects
* Group discussions

**Recommended Resources**

* Computers
* Computer software
* Stationery
* Simulated workplace environment
* Sample documents
* PPE

# CONTAINER OPERATION DUTIES

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

**Relationship to Occupational Standards**

This unit addresses the unit of competency: perform container operation duties

**Duration of Unit:** 380 hours

**Unit Description**

This unit describes competencies required to perform container operation duties. It involves developing container terminal operation plans, allocating container terminal resources, performing empty container operations, managing shipping containers, carrying out container segregation, monitoring gate operaions, monitoring loading/offloading operations and managing container yard operations

**Summary of Learning Outcomes**

1. Develop container terminal operation plan
2. Allocate container terminal resources
3. Perform empty container operations
4. Manage shipping containers
5. Carry out container segregation
6. Monitor gate operations
7. Monitor loading/offloading operations
8. Manage container yard operations

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Develop container terminal operation plans
 | * Definition of terms
	+ Berth plan
	+ Yard plan
	+ Resource plan
* Development of berth plans
* Development of yard plans
* Development of resource plans
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Allocate container terminal resources
 | * Berth allocation
* Yard allocation
* Equipment allocation
* Labour allocation
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Perform empty container operations
 | * Empty container operation documents
	+ Identification
	+ Preparation
* Development of container operation plans
* Empty container handling
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Manage shipping containers
 | * Shipping container documents
	+ Identification
	+ Preparation
* Development of shipping container plans
* Handling shipping containers
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Carry out container segregation
 | * Administration of shipping documents
	+ Obtaining
	+ Review
* Cargo identification
* Development of cargo segregation plans
* Container segregation
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Monitor gate operations
 | * Gate operations documents
	+ Identification
	+ Preparation
* Development of gate operations documents
* Cargo verification
* Cargo inspection
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Monitor loading/offloading operations
 | * Stock balancing
* Loading and offloading documents
	+ Identification
	+ Preparation
* Development of loading plans
* Development of offloading plans
* Handling cargo
	+ Loading
	+ Offloading
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Manage container yard operations
 | * Development of yard plans
* Allocation of yard resources
* Handling yard cargo
 | * Written tests
* Oral
* Practical/Projects
 |

**Suggested Delivery Methods**

* Demonstration by trainer
* Practical work by trainee
* Demonstration videos
* Projects
* Group discussions
* Simulations

**Recommended Resources**

* PPE
* Computers
* Computer software
* Communication equipment
* Stationery
* Sample documents

# SHIPPING BUSINESS MANAGEMENT

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

**Relationship to Occupational Standards**

This unit addresses the unit of competency: manage shipping business

**Duration of Unit:** 300 hours

**Unit Description**

This unit describes competencies required to manage shipping business. It involves preparing shipping plan, executing shipping business contract, controlling shipping budget, managing shipping documents, performing cargo connection, handling cargo claims, managing operations resources, performing ship husbandry operations, handling international sales transactions and managing liner ship operations.

**Summary of Learning Outcomes**

1. Prepare shipping plan
2. Execute shipping business contract
3. Control shipping budget
4. Manage shipping documents
5. Perform cargo connection
6. Handle cargo claims
7. Manage operations resources
8. Perform husbandry operations
9. Handle international sales transactions
10. Manage liner ship operations

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Prepare shipping plan
 | * Definition of terms
	+ Shipping plan
* Identification of shipping consignments
* Description of consignment quantities
* Preparation of consignments
* Consignment labelling
* Preparation of shipping plans
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Execute shipping business contract
 | * Booking of vessel space
* Confirmation of space availability
* Preparation of shipping documents
* Calling forward of cargo
* Cargo delivery process
* Review of contract requirements
* Contract execution
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Control shipping budget
 | * Identification of shipping operations
* Establishment of budget requirements
* Allocation of resources
* Preparation of budget proposal
* Implementation of budget proposal
* Monitoring budget implementation
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Manage shipping documents
 | * Definition of terms
	+ Miscellaneous forms
	+ Shipping documents
* Identification of shipping documents
* Preparation of shipping documents
* Screening of shipping documents
* Preparation of miscellaneous forms
* Storage of shipping documents
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Perform cargo connection
 | * Definition of through transport cargo
* Receiving cargo
* Through-transport cargo connection
* Cargo delivery
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Handle cargo claims
 | * Definition of cargo claims
* Receipt of cargo claims
* Cargo survey
* Processing cargo claims
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Manage operations resources
 | * Definition of resource inventory
* Development of resource inventory
* Preparation of resource plan
* Allocation of resources
* Resource utilisation
* Monitoring resource utilisation
* Reviewing resource plans
* Maintenance of resources
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Perform ship husbandry operations
 | * Definition of terms
	+ Ship clearance
* Performing ship clearance
* Identification of port facilities and services
* Booking of port facilities and services
* Ship needs
* Crew needs
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Handle international sales transactions
 | * Definition of terms
	+ Sales contract
	+ Incoterms
	+ Sales agreement
* Signing of sales contract
* Cargo shipping
* Cargo delivery
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Manage liner ship operations
 | * Definition of terms
	+ Liner ship operations
	+ Vessel scheduling
* Vessel scheduling
* Communication of ship operating schedule
* Maintenance of vessel schedules
* Arranging shipping cooperation
* Procuring ship management services
 | * Written tests
* Oral
* Practical/Projects
 |

**Suggested Delivery Methods**

* Demonstration by trainer
* Practical work by trainee
* Demonstration videos
* Projects
* Group discussions

**Recommended Resources**

* Simulated workplace environment
* Computers
* Stationery
* Computer software
* Sample documents relevant to management of shipping business
* Maritime Atlas
* PPE

# SHIPBROKING AND CHARTERING

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

**Relationship to Occupational Standards**

This unit addresses the unit of competency: carry out shipbroking and chartering

**Duration of Unit:** 220 hours

**Unit Description**

This unit describes competencies required to carry out shipbroking and chartering. It involves chartering a ship, estimating cost of ship voyage, carrying out dry cargo and tanker chartering and preparing time sheets.

**Summary of Learning Outcomes**

1. Charter a ship
2. Estimate cost of voyage
3. Carry out dry cargo chartering
4. Carry out tanker chartering
5. Prepare time sheet

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Charter a ship
 | * Definition of terms
	+ Shipbrokers
* Engaging shipbrokers
* Initiation of chartering offers
* Charter party negotiations
* Charter party
	+ Definition
	+ Types of charter parties
* Voyage instructions
* Ship inspection
	+ On-hire survey (time charter)
	+ Off-hire survey (time charter)
	+ Holds or tanks survey (voyage charter)
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Estimate cost of ship voyage
 | * Identification of ship costs
* Calculation of ship voyage costs
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Carry out dry cargo chartering
 | * Engaging shipbrokers
* Initiating chartering offers
* Carrying out negotiations
* Establishment of charter party
* Establishment of voyage instructions
* Ship inspection
* Conflict resolution
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Carry out tanker chartering
 | * Engaging shipbroker
* Initiating chartering offers
* World Scale 100
* Establishment of charter party
* Establishment of voyage instructions
* Ship inspection
* Conflict resolution
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Prepare time sheet
 | * Definition of terms
	+ Notice of Readiness (NOR)
* Tendering of Notice of Readiness
	+ Role of ship master in tendering
	+ Role of charterer in tendering
* Lay time
	+ Definition of lay time
	+ Types of lay time
* Preparation of statement of facts
* Time sheet compilation
 | * Written tests
* Oral
* Practical/Projects
 |

**Suggested Delivery Methods**

* Demonstration by trainer
* Practical work by trainee
* Demonstration videos
* Projects
* Group discussions

**Recommended Resources**

* Simulated workplace environment
* Computers
* Stationery
* Computer software
* Sample documents
* Maritime atlas
* World Scale 100
* PPE

# MULTI-MODAL TRANSPORT OPERATIONS

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

**Relationship to Occupational Standards**

This unit addresses the unit of competency: perform multi-modal transport operations

**Duration of Unit:** 300 hours

**Unit Description**

This unit of competency describes performing multi-modal transport operations. It involves marketing multi-modal transport logistics service, performing international cargo distribution, processing multi-modal transport documents, managing multi modal transport resources, managing mulit-modal transport inventory, determining processes in multi-modal transport and handling multi-modal transport cargo claims.

**Summary of Learning Outcomes**

1. Market multi-modal transport logistics service
2. Perform international cargo distribution
3. Process multi modal transport documents
4. Manage multi modal transport resources
5. Manage multi modal transport inventory
6. Determine prices in multi modal transport
7. Handle multi modal transport cargo claims

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Market multi-modal transport logistics service
 | * Definition of terms
	+ Multi modal transport
* Identification of marketing needs
* Identification of target markets
* Establishing marketing goals
* Development of marketing strategy
* Development of marketing plan
* Identification of marketing tools
* Establishment of marketing tools
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Perform international cargo distribution
 | * Definition of international cargo distribution
* Receiving shipping instructions
* Booking cargo
* Cargo delivery
* Weighing cargo
* Freight computation
* Shipping cargo on board
* Processing shipping documents
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Process multi modal transport documents
 | * Identification of shipping documents
* Processing shipping documents
* Archiving shipping documents
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Manage multi modal transport resources
 | * Identification of multi-modal transport resources
* Development of multi-modal transport resources management strategy
* Development multi-modal transport resources management tools
* Management of multi-modal transport resources
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Manage multi modal transport inventory
 | * Definition of terms
	+ Multi-modal transport inventory
* Classification of inventory
* Development of inventory management strategy
* Implementation of inventory management strategy
* Monitoring and evaluation of strategy implementation
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Determine prices in multi modal transport
 | * Determination of cargo transportation methods
* Determination of freight
* Determination of handling and clearing costs
* Processing service and insurance charges
* Computation of freight
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Handle multi-modal transport cargo claims
 | * Receipt of cargo claims
* Cargo surveying
* Processing cargo claims
 | * Written tests
* Oral
* Practical/Projects
 |

**Suggested Delivery Methods**

* Demonstration by trainer
* Practical work by trainee
* Demonstration videos
* Projects
* Group discussions

**Recommended Resources**

* Simulated workplace environment
* Computers
* Stationery
* Computer software
* Maritime atlas
* Sample documents
* PPE
* Tariffs

# CLEARING AND FORWARDING

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

**Relationship to Occupational Standards**

This unit addresses the unit of competency: perform clearing and forwarding operations

**Duration of Unit:** 300 hours

**Unit Description**

This unit describes competencies required to perform clearing and forwarding operations. It involves performing ship clearance operations, performing cargo clearance, performing warehousing operations, performing cargo cosolidation/deconsolidation operations and arranging for cargo haulage.

**Summary of Learning Outcomes**

1. Perform ship clearance operations
2. Perform cargo clearance operations
3. Perform warehousing operations
4. Perform cargo consolidation/deconsolidation operations
5. Arrange for cargo haulage

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

|  |  |  |
| --- | --- | --- |
| **Learning Outcome** | **Content** | **Suggested Assessment Methods** |
| 1. Perform ship clearance operations
 | * Definition of terms
	+ Ship clearance
	+ Vessel arrival
* Identification of requirements for vessel arrival
* Identification of vessel arrival declaration documents
* Submission of arrival documents
* Archival of vessel arrival records
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Perform cargo clearance operations
 | * Definition of cargo clearance
* Preparation of pre-clearance documents
* Cargo declaration
* Clearance of cargo
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Perform warehousing operations
 | * Definition of warehousing
* Maintenance of warehouse layout
* Record maintenance
* Maintenance of quality of stored goods
* Securing stored goods
* Management of warehouse plant and equipment
* Distribution of stored goods
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Perform cargo consolidation/deconsolidation operations
 | * Definition of terms
	+ Cargo consolidation
	+ Cargo deconsolidation
* Identification of freight consolidation needs
* Identification of freight deconsolidation needs
* Development of freight consolidation/deconsolidation program
* Freight consolidation/deconsolidation
 | * Written tests
* Oral
* Practical/Projects
 |
| 1. Arrange for cargo haulage
 | * Definition of Haulage contract
* Awarding haulage contracts
* Allocation of haulage equipment
* Cargo loading
* Cargo delivery
 | * Written tests
* Oral
* Practical/Projects
 |

**Suggested Delivery Methods**

* Demonstration by trainer
* Practical work by trainee
* Demonstration videos
* Projects
* Group discussions

**Recommended Resources**

* Simulated workplace environment
* Computers
* Stationery
* Computer software
* Sample documents
* Maritime atlas
* PPE