


Curriculum Document				
Curriculum Code	Curriculum Title			
735101001	National Occupational Certificate: Deck Hand (Able Seaman) (Able Seafarer Deck and Fishing)			
Development Quality Partner	Name	E-mail	Phone	Logo
	Transport Education Training Authority	Victor@teta.org.za	011-781 1280	

Learner QDF Signature

Date

QDF Signature

Date

DQP Representative Signature

Date

SECTION 1: CURRICULUM SUMMARY

1. Occupational Information

1.1 Associated Occupation

735101: Deck Hand (Able Seaman)

1.2 Occupation or Specialisation Addressed by this Curriculum

735101001: Able Seafarer Deck and Fishing

1.3 Alternative Titles used by Industry

- Able Seafarer Deck (Fishing)
- Able Seafarer Deck (Port Operations)
- Able Seafarer Deck
- Able Seafarer
- Able Seaman
- Barge Hand
- Boatswain / Bosun

2. Curriculum Information

2.1 Curriculum Structure

This qualification is made up of the following compulsory Knowledge and Practical Skill Modules:

Knowledge Modules:

- 735101001-KM-01, Maritime Operations Theory, NQF Level 3, Learning Contract Time 20 days (Credits: 16)
- 735101001-KM-02, Proficiency in Survival Craft and Rescue Boats, NQF Level 4, Learning Contract Time 4 days (Credits: 4)
- 735101001-KM-03, Personal Survival Techniques, NQF Level 4, Learning Contract Time 2 days (Credits: 2)
- 735101001-KM-04, Personal Safety and Social Responsibility, NQF Level 4, Learning Contract Time 2 days (Credits: 2)
- 735101001-KM-05, Medical First Aid, NQF Level 3, Learning Contract Time 5 days (Credits: 4)
- 735101001-KM-06, Fire Prevention and Fire Fighting, NQF Level 3, Learning Contract Time 3 days (Credits: 2)
- 735101001-KM-07, Fishing Safety, NQF Level 3, Learning Contract Time 2 days (Credits: 2)
- 735101001-KM-08, Safety Familiarisation, NQF Level 3, Learning Contract Time 3 days (Credits: 2)
- 735101001-KM-09, Security Awareness, NQF Level 3, Learning Contract Time 3 days (Credits: 2)
- 735101001-KM-10, Fundamentals of Communications, NQF Level 3, Learning Contract Time 2 days, (Credits 2)
- 735101001-KM-11, Introduction to Applied Marine Science and Maths, NQF Level 3, Learning Contract Time 2 day, (Credits 2)

Total number of credits for Knowledge Modules: 40 (30%)

Practical Skill Modules:

- 735101001-PM-01, Assist with navigation at support level, NQF Level 3, Learning Contract Time 50h, Credits 5
- 735101001-PM-02, Handle and stow cargo and / or catch (fish) at support level, NQF Level 3, Learning Contract Time 40h, Credits 4
- 735101001-PM-03, Assist with onboard operations and care for persons on board, NQF Level 3, Learning Contract Time 50h, Credits 5
- 735101001-PM-04, Maintain and repair at support level, NQF Level 3, Learning Contract Time 40h, Credits 4
- 735101001-PM-05, Assist with mooring, towing, berthing and anchoring, NQF Level 3, Learning Contract Time 40h, Credits 4
- 735101001-PM-06, Carry out security duties, NQF Level 3, Learning Contract Time 20h, Credits 2

Total number of credits for Practical Skill Modules: 24 (18%)

This qualification also requires the following **Work Experience Modules:**

- 735101001-WM-01, Following navigation procedures at support level NQF Level 3, Learning Contract Time 140h, Credits 14
- 735101001-WM-02, Complying with cargo and / or catch (fish) handling and stowage processes at the support level NQF Level 3, Learning Contract Time 120h, Credits 12
- 735101001-WM-03, Abiding by onboard operating procedures and caring for persons on board at support level NQF Level 3, Learning Contract Time 120h, Credits 12
- 735101001-WM-04, Complying with maintenance and repair processes at the support level NQF Level 3, Learning Contract Time 120h, Credits 12
- 735101001-WM-05, Adhering to mooring, towing, berthing and anchoring processes NQF Level 3, Learning Contract Time 120h, Credits 12
- 735101001-WM-06, Adhering to security procedures NQF Level 3, Learning Contract Time 80h, Credits 8

Total number of credits for Work Experience Modules: 70 (52%)

2.2 Entry Requirements

The entry requirements are prescribed by the Merchant Shipping (Safe Manning Training and Certification) Regulation.

Further to the above requirement, the learner must have a current approved SAMSA medical fitness and eye test certificate.

3. Assessment Quality Partner Information

Name of body: South African Maritime Safety Authority (SAMSA)

Address of body: 146 Lunnon Road, Cnr Jan Shoba & Lunnon Road, Hillcrest, 0183
P.O Box 13186, Hatfield, Gauteng, Republic of South Africa

Contact person name: Mr Azwimbavhi Mulaudzi

Contact person work telephone number: (012) 366-2600, amulaudzi@samsa.org.za

4. Part Qualification Curriculum Structure

4.1 735101001#01: Able Seafarer Deck

The Able Seafarer Deck performs navigational, operational and maintenance tasks at a support level on board a vessel

Knowledge Modules:

- 735101001-KM-01, Maritime Operations Theory, NQF Level 3, Learning Contract Time 20 days (Credits: 16)
- 735101001-KM-02, Proficiency in Survival Craft and Rescue Boats, NQF Level 4, Learning Contract Time 4 days (Credits: 4)
- 735101001-KM-03, Personal Survival Techniques, NQF Level 4, Learning Contract Time 2 days (Credits: 2)
- 735101001-KM-04, Personal Safety and Social Responsibility, NQF Level 4, Learning Contract Time 2 days (Credits: 2)
- 735101001-KM-05, Medical First Aid, NQF Level 3, Learning Contract Time 5 days (Credits: 4)
- 735101001-KM-06, Fire Prevention and Fire Fighting, NQF Level 3, Learning Contract Time 3 days (Credits: 2)
- 735101001-KM-08, Safety Familiarisation, NQF Level 3, Learning Contract Time 3 days (Credits: 2)
- 735101001-KM-09, Security Awareness, NQF Level 3, Learning Contract Time 3 days (Credits: 2)
- 735101001-KM-10, Fundamentals of Communications, NQF Level 3, Learning Contract Time 2 days, (Credits 2)
- 735101001-KM-11, Introduction to Applied Marine Science and Maths, NQF Level 3, Learning Contract Time 2 day, (Credits 2)

Total number of credits for Knowledge Modules: 38

Practical Skill Modules:

- 735101001-PM-01, Assist with navigation at support level, NQF Level 3, Learning Contract Time 50h, Credits 5
- 735101001-PM-02, Handle and stow cargo at support level, NQF Level 3, Learning Contract Time 40h, Credits 4
- 735101001-PM-03, Assist with onboard operations and care for persons on board, NQF Level 3, Learning Contract Time 50h, Credits 5
- 735101001-PM-04, Maintain and repair at support level, NQF Level 3, Learning Contract Time 40h, Credits 4
- 735101001-PM-05, Assist with mooring, towing, berthing and anchoring, NQF Level 3, Learning Contract Time 40h, Credits 4
- 735101001-PM-06, Carry out security duties, NQF Level 3, Learning Contract Time 20h, Credits 2

Total number of credits for Practical Skill Modules: 24

This qualification also requires the following **Work Experience Modules:**

- 735101001-WM-01, Following navigation procedures at support level NQF Level 3, Learning Contract Time 140h, Credits 14
- 735101001-WM-02, Complying with cargo handling and stowage processes at the support level NQF Level 3, Learning Contract Time 120h, Credits 12
- 735101001-WM-03, Abiding by onboard operating procedures and caring for persons on board at support level NQF Level 3, Learning Contract Time 120h, Credits 12

- 735101001-WM-04, Complying with maintenance and repair processes at the support level NQF Level 3, Learning Contract Time 120h, Credits 12
- 735101001-WM-05, Adhering to mooring, towing, berthing and anchoring processes NQF Level 3, Learning Contract Time 120h, Credits 12
- 735101001-WM-06, Adhering to security procedures NQF Level 3, Learning Contract Time 80h, Credits 8

Total number of credits for Work Experience Modules: 70

735101001#02: Able Seafarer Fishing

The Able Seafarer Fishing performs navigational, operational and maintenance tasks at a support level on board a fishing vessel

Knowledge Modules:

- 735101001-KM-01, Maritime Operations Theory, NQF Level 3, Learning Contract Time 20 days (Credits: 16)
- 735101001-KM-02, Proficiency in Survival Craft and Rescue Boats, NQF Level 4, Learning Contract Time 4 days (Credits: 4)
- 735101001-KM-03, Personal Survival Techniques, NQF Level 4, Learning Contract Time 2 days (Credits: 2)
- 735101001-KM-04, Personal Safety and Social Responsibility, NQF Level 4, Learning Contract Time 2 days (Credits: 2)
- 735101001-KM-05, Medical First Aid, NQF Level 3, Learning Contract Time 5 days (Credits: 4)
- 735101001-KM-06, Fire Prevention and Fire Fighting, NQF Level 3, Learning Contract Time 3 days (Credits: 2)
- 735101001-KM-07, Fishing Safety, NQF Level 3, Learning Contract Time 2 days (Credits: 2)
- 735101001-KM-08, Safety Familiarisation, NQF Level 3, Learning Contract Time 3 days (Credits: 2)
- 735101001-KM-09, Security Awareness, NQF Level 3, Learning Contract Time 3 days (Credits: 2)
- 735101001-KM-10, Fundamentals of Communications, NQF Level 3, Learning Contract Time 2 days, (Credits 2)
- 735101001-KM-11, Introduction to Applied Marine Science and Maths, NQF Level 3, Learning Contract Time 2 day, (Credits 2)

Total number of credits for Knowledge Modules: 40

Practical Skill Modules:

- 735101001-PM-01, Assist with navigation at support level, NQF Level 3, Learning Contract Time 50h, Credits 5
- 735101001-PM-02, Handle and stow catch (fish) at support level, NQF Level 3, Learning Contract Time 40h, Credits 4
- 735101001-PM-03, Assist with onboard operations and care for persons on board, NQF Level 3, Learning Contract Time 50h, Credits 5
- 735101001-PM-04, Maintain and repair at support level, NQF Level 3, Learning Contract Time 40h, Credits 4
- 735101001-PM-05, Assist with mooring, towing, berthing and anchoring, NQF Level 3, Learning Contract Time 40h, Credits 4

- 735101001-PM-06, Carry out security duties, NQF Level 3, Learning Contract Time 20h, Credits 2

Total number of credits for Practical Skill Modules: 24

This qualification also requires the following **Work Experience Modules:**

- 735101001-WM-01, Following navigation procedures at support level NQF Level 3, Learning Contract Time 140h, Credits 14
- 735101001-WM-02, Complying with catch (fish) handling and stowage processes at the support level NQF Level 3, Learning Contract Time 120h, Credits 12
- 735101001-WM-03, Abiding by onboard operating procedures and caring for persons on board at support level NQF Level 3, Learning Contract Time 120h, Credits 12
- 735101001-WM-04, Complying with maintenance and repair processes at the support level NQF Level 3, Learning Contract Time 120h, Credits 12
- 735101001-WM-05, Adhering to mooring, towing, berthing and anchoring processes NQF Level 3, Learning Contract Time 120h, Credits 12
- 735101001-WM-06, Adhering to security procedures NQF Level 3, Learning Contract Time 80h, Credits 8

Total number of credits for Work Experience Modules: 70

5. Articulation

Relation of this Curriculum to the Occupation and Qualification Progression

Learners entering this qualification will likely feed into the industry with a National Occupational Certificate: Able Seafarer Deck and / or Able Seafarer Fishing.

The likely vertical progression for this qualification is a National Occupational Certificate: Ordinary Seafarer, Able Seafarer, Vessel's Officer (Fishing Deck Officer), Deck Officer

This National Occupational Certificate articulates horizontally with other Able Seafarer occupations with cross-cutting credits in the Knowledge Specifications, i.e. Deck, Fishing and Port Operations

6. International Comparability

The international comparability study conducted specifically focused on identifying occupational standards or qualifications used in other countries that might contain indicators of best practice that could be used for comparison to or in the development of the Able Seafarer qualifications to be submitted for registration to the QCTO.

The International Maritime Organisation and its member states (UK, Australia and India) were selected as best practice as it was accepted as International standards.

The content, scope and duration of the qualification is uniform internationally.

The Maritime profession is an area with globally recognised best practices, standards and Qualifications. This qualification and set of module specifications utilises international and locally recognised best practice and standards.

The data collection process included the following:

- International legislation and conventions
- An extensive Internet search focussing on the countries identified as best practice countries

- Follow-up by email to obtain more detailed information especially in relation to case studies
- Contacting professional and academic colleagues in target countries with direct involvement in the development or application of relevant vocational qualifications

The international comparability study was done in various countries, such as Papua New Guinea, United Kingdom, Australia, USA, India and South Africa.

Conclusion

The identification of tasks and job profiles is based upon a sound methodology and extensive consultation with practitioners, resulting in valid and credible outputs that informed the development of the qualifications and module specifications. Useful comparisons may be drawn between the environmental trends identified in the best practice countries and those affecting the competencies covered in these qualifications and module specifications.

7. Likely uptake of qualification: learners

Although exact numbers are difficult to come by, the employees within the Maritime sector have already indicated a critical need for these advanced level occupational qualifications. Therefore a big uptake is expected should these occupational certificates and part qualifications be associated to the regulatory environment within the Maritime industry.

8. Likely uptake of qualification: providers

It is anticipated that these occupational qualifications will be provided by various tertiary institutions and private providers

SECTION 2: OCCUPATIONAL PROFILE

1. Occupational Purpose

The Able Seafarer Deck and Fishing performs navigational, operational and maintenance tasks at a support level on board a vessel

2. Occupational Tasks

- Navigation assistance provided at support level (NQF Level 3)
- Cargo and / or catch (fish) handling and stowage at the support level (NQF Level 3)
- Onboard operations assistance provided and care for persons on board at support level (NQF Level 3)
- Maintenance and repairs provided at the support level (NQF Level 3)
- Mooring, towing, berthing and anchoring assistance provided at the support level (NQF Level 3)
- Security duties carried out at the support level (NQF Level 3)

3. Occupational Task Details

3.1 Navigation assistance provided at support level (NQF Level 3)

Unique Product or Service:

Safe navigation and watchkeeping

Occupational Responsibilities:

The learner will be required to:

- Steer the vessel and comply with helm orders
- Maintain a look-out
- Contribute to a safe watch
- Respond in an emergency situation

Occupational Contexts:

The learner will be required to be exposed to:

- Bridge watchkeeping procedures
- Helm order instructions
- Communication procedures
- Collision regulations
- Emergency procedures
- Environmental protection procedures
- Flag usage and display

3.2 Cargo and / or catch (fish) handling and stowage at the support level (NQF Level 3)

Unique Product or Service:

Stowed and secure cargo and / or catch (fish)

Occupational Responsibilities:

The learner will be required to:

- Handle different types of cargoes and / or catch (fish)

- Assist in stowing and securing cargo and / or catch (fish)
- Identify and handle hazardous cargo and / or catch (fish)

Occupational Contexts:

The learner will be required to be exposed to:

- Cargo and / or catch (fish) stowage plan
- Onboard cargo and / or catch (fish) handling and stowage procedures
- International Maritime Dangerous Goods legislation
- Stowage and securing manual
- Code of Safe Working Practice for Merchant Seaman / Fishermen

3.3 Onboard operations assistance provided and care for persons on board at support level (NQF Level 3)

Unique Product or Service:

Protected vessel and personnel

Occupational Responsibilities:

The learner will be required to:

- Identify and use different types of lifting equipment
- Operate and maintain hatch covers and associated equipment
- Apply occupational health and safety precautions
- Apply safety measures and contribute to the prevention of pollution of the maritime environment

Occupational Contexts:

The learner will be required to be exposed to:

- Onboard Safety Procedures
- Onboard Operational procedures
- National and international Maritime safety legislation
- Marine pollution prevention procedures

3.4 Maintenance and repairs provided at the support level (NQF Level 3)

Unique Product or Service:

Well maintained vessel and equipment

Occupational Responsibilities:

The learner will be required to:

- Use painting, lubrication and cleaning materials and equipment
- Perform routine maintenance and repairs
- Use hand and power tools and dispose of waste materials
- Adhere to permit-to-work and related procedures

Occupational Contexts:

The learner will be required to be exposed to:

- Onboard maintenance and repair procedures.
- National and international Maritime safety legislation
- Onboard Waste and Garbage Management Procedures

- MARPOL Convention

3.5 Mooring, towing, berthing and anchoring assistance provided at support level (NQF Level 3)

Unique Product or Service:

Safe vessel and crew / cargo / catch (fish)

Occupational Responsibilities:

The learner will be required to:

- Assist with anchoring a vessel
- Aid with berthing a vessel
- Support mooring and towing a vessel

Occupational Contexts:

The learner will be required to be exposed to:

- Onboard procedures for mooring, towing, berthing and anchoring a vessel

3.6 Security duties carried out at the support level (NQF Level 3)

Unique Product or Service:

Safe and secure vessel

Occupational Responsibilities:

The learner will be required to:

- Carry out gangway watchkeeping duties
- Maintain a security lookout
- Respond to and report security incidents

Occupational Contexts:

The learner will be required to be exposed to:

- International and national maritime security legislation
- Vessel security procedures and contingency plans

SECTION 3: CURRICULUM COMPONENT SPECIFICATIONS

SECTION 3A: KNOWLEDGE MODULE SPECIFICATIONS

List of Knowledge Modules for which Specifications are included

- 735101001-KM-01, Maritime Operations Theory, NQF Level 3, Learning Contract Time 20 days (Credits: 16)
- 735101001-KM-02, Proficiency in Survival Craft and Rescue Boats, NQF Level 4, Learning Contract Time 4 days (Credits: 4)
- 735101001-KM-03, Personal Survival Techniques, NQF Level 4, Learning Contract Time 2 days (Credits: 2)
- 735101001-KM-04, Personal Safety and Social Responsibility, NQF Level 4, Learning Contract Time 2 days (Credits: 2)
- 735101001-KM-05, Medical First Aid, NQF Level 3, Learning Contract Time 5 days (Credits: 4)
- 735101001-KM-06, Fire Prevention and Fire Fighting, NQF Level 3, Learning Contract Time 3 days (Credits: 2)
- 735101001-KM-07, Fishing Safety, NQF Level 3, Learning Contract Time 2 days (Credits: 2)
- 735101001-KM-08, Safety Familiarisation, NQF Level 3, Learning Contract Time 3 days (Credits: 2)
- 735101001-KM-09, Security Awareness, NQF Level 3, Learning Contract Time 3 days (Credits: 2)
- 735101001-KM-10, Fundamentals of Communications, NQF Level 3, Learning Contract Time 2 days, (Credits 2)
- 735101001-KM-11, Introduction to Applied Marine Science and Maths, NQF Level 3, Learning Contract Time 2 day, (Credits 2)

1 735101001-KM-01: Maritime Operations Theory, NQF Level 3, Learning Contract Time 20 Days (Credits: 16)

1.1 Purpose of the Knowledge Modules

The main focus of the learning in this knowledge subject is to equip qualifying learners with knowledge and skills to conduct the essential operations associated with efficient and safe Maritime Operations within a sea going context.

The learning will enable learners to demonstrate an understanding of:

- KM-01-KT01: Theory of Safe Navigational Watch (15%)
- KM-01-KT02: Concepts of Cargo Handling and Stowage (10%)
- KM-01-KT03: Policies and Procedures of Onboard Operations Support and Care for Persons on Board (20%)
- KM-01-KT04: Processes and Procedures on Onboard Maintenance and Repairs (20%)
- KM-01-KT05: Concepts and Procedures of Mooring, Towing, Berthing and Anchoring Support (20%)
- KM-01-KT06: Fundamentals of Security Duties (15%)

1.2 Guidelines for Topics

1.2.1 KM-01-KT01: Theory of Safe Navigational Watch (15%)

Topic elements to be covered include:

- KT0101 Vessel Steering and Helm Orders
- KT0102 Look-out Procedures & Practices
- KT0103 Safe Navigation Watchkeeping
- KT0104 Emergency Response

Internal Assessment Criteria

1. Identify and describe the different compass card notations
2. Determine appropriate compass type i.e. gyro/magnetic; standard/steering
3. Interpret and explain rudder angle indicator display
4. Explain the meaning of helm orders, related instructions and responses
5. Discuss the responsibilities of a lookout including compulsory rest periods and fitness for duty
6. Identify a sound signal, light and/or object
7. Understand the reporting procedure for a sound signal, light and/or object
8. Recognise single letter signal flags (A, B, G, H, O, P, Q)
9. List and describe onboard terms and definitions
10. Discuss the use of internal communication and alarm systems
11. Clarify your understanding of orders and communicate with regards to watchkeeping duties
12. Explain procedures for the taking over, the maintenance and the handover of a watch
13. Understand the International Regulations For The Prevention Of Collisions At Sea (Rules 7, 13, 14,15,18,19 & 21) & Annex relating to distress signals
14. Explain the functions of the muster list and emergency signals
15. Explain the procedures related to emergencies
16. Describe the location of emergency equipment and escape routes
17. Identify the appropriate response and equipment in an emergency

(Weight: 15%)

1.2.2 KM-01-KT02: Concepts of Cargo and / or Catch (Fish) Handling and Stowage (10%)

Topic elements to be covered include:

KT0201	Cargo and / or catch (fish) handling
KT0202	Cargo and / or catch (fish) stowage and securing
KT0203	Hazardous cargo handling

Internal Assessment Criteria

1. Identify cargo and / or catch (fish) handling equipment suitable for different cargo and / or catch (fish) types
2. Understand appropriate methods for securing different cargo and / or catch (fish) types
3. Identify hazardous cargo and / or catch (fish) according to labelling
4. Explain the safety aspects when dealing with hazardous cargoes in liquid and solid bulk and cargo transport units

(Weight 10%)

1.2.3 KM-01-KT03: Policies and Procedures of Onboard Operations Support and Care for Persons on Board (20%)

Topic elements to be covered include:

KT0301	Lifting Equipment
KT0302	Hatch Covers and Associated Equipment
KT0303	Mooring Equipment
KT0304	Occupational Health and Safety Precautions
KT0305	Pollution Prevention and Response Procedures

Internal Assessment Criteria

1. List various types of lifting equipment and identify suitable lifting gear within safe working load limitations
2. Identify basic signals for operational equipment, winches, windlasses, cranes & hoists
3. Name the parts of a tackle and explain how to rig a purchase to advantage and disadvantage
4. Explain the different types of knots, bends, hitches and splices and whippings and explain their application
5. Describe the procedures for preparing a crane and rigging and topping a derrick
6. Name the safety pre-checks for lifting equipment including the importance of limit switches
7. Appreciate the contribution of observation to the safe use of lifting equipment
8. Describe the procedure for opening and closing common forms of hatches safely, not limited to MacGregor, Jack-Knife and Pontoon
9. List procedures for securing hatch covers for passage
10. Identify all the various parts of hatch covers and associated equipment
11. Name all parts of mooring apparatus
12. Discuss the operation of winches (manual & self-tensioning), windlasses, capstans and related equipment
13. Describe characteristics of fibre & wire ropes, cables and chains, their construction, use and markings, maintenance and proper stowage and use of appropriate stoppers
14. Explain safety procedures for the use of mooring equipment

15. Identify safety signs and describe it in terms of associated risks and safe conduct
16. Explain safe working practices and personal onboard safety procedures designed to safeguard personnel & the vessel
17. Describe procedures for safe rigging of pilot ladders and gangways
18. Identify various types of personal protective equipment and explain their uses
19. Explain the permit to work system and enumerate procedures which require such permits
20. List the safety procedures for work aloft, work over the side, confined spaces, electrical, hot work
21. Describe the factors that constitute a garbage plan and explain the disposal of pollutants
22. Discuss the basic elements of the MARPOL Convention
23. Discuss the use of anti-pollution and SOPEP equipment

(Weight 20%)

1.2.4 KM-01-KT04: Processes and Procedures on Onboard Maintenance and Repairs (20%)

Topic elements to be covered include:

- | | |
|--------|--|
| KT0401 | Painting, Lubrication and Cleaning Materials and Equipment |
| KT0402 | Routine Maintenance |
| KT0403 | Hand and Power Tools |
| KT0404 | Maintenance Waste Material Disposal |

Internal Assessment Criteria

1. Interpret the conditions under which corrosion occurs
2. Identify and describe various types of primers, undercoats and paint systems to prevent or inhibit corrosion
3. Appreciate the importance of correct surface preparation and application of coatings on timber and metal surfaces
4. Appreciate the importance of seaman-like vessel and good housekeeping
5. Explain planned maintenance procedures including lubrication and maintenance of deck equipment
6. Identify hand and portable power tools and describe their uses
7. Describe procedures for the safe operation of hand and power tools
8. Dispose of waste materials from working processes according to the garbage plan

(Weight 20%)

1.2.5 KM-01-KT05: Concepts and Procedures of Mooring, Towing, Berthing and Anchoring Support (20%)

Topic elements to be covered include:

- | | |
|--------|-----------------------------|
| KT0501 | Vessel Anchoring Operations |
| KT0502 | Vessel Berthing Operations |
| KT0503 | Vessel Mooring and Towing |

Internal Assessment Criteria

1. Name and describe the various components of an anchoring system and their functions
2. List the procedures & order of events for the use of anchors in various operations
3. Explain procedures for anchoring, weighing anchor and securing for sea

4. Define the purpose of mooring and tug lines and how each line functions
5. Explain the procedures & order of events for making fast & letting go mooring and tug lines & wires & mooring to a buoy
6. Clarify how to rig a towing wire and rig a towing hook
7. Describe the function of stoppers, heaving lines and messenger lines in the mooring process

(Weight 20%)

1.2.6 KM-01-KT06: Fundamentals of Security Duties (15%)

Topic elements to be covered include:

- | | |
|--------|-----------------------------|
| KT0601 | Gangway Watchkeeping Duties |
| KT0602 | Security Lookout Duties |
| KT0603 | Security Incident Response |

Internal Assessment Criteria

1. Describe the gangway watchkeeper's duties in relation to the ISPS code and the Vessel Security Plan
2. Discuss the significance of ISPS security levels and how that impacts his/her duties
3. Identify potential security threats
4. Explain the procedures to follow when responding to security incidents

(Weight 15%)

1.3 Provider Accreditation Requirements for the Knowledge Module

Physical Requirements:

- Classroom furniture (chairs and tables, audio & visual equipment and all other equipment conducive to a learning environment)
- Handouts and stationery (electronic consumables, pencils/paper)
- Learning material

Human Resource Requirements:

- Facilitator/learner ratio 1 to 20
- Relevant qualifications/experience
- Achieved accreditation for both facilitators and courseware from SAMSA

Legal Requirements:

- Accredited with the South African Maritime Safety Authority
- Accredited as per QCTO requirements

1.4 Critical Topics to be Assessed Externally for the Knowledge Subject

- None

1.5 Exemptions

- None

2. 735101001-KM-02, Proficiency in Survival Craft and Rescue Boats, NQF level 4, Learning contract time 4 Days, (Credits: 4)

2.1 Purpose of the Knowledge Module

The main focus of the learning in this knowledge subject is to equip qualifying learners with knowledge and understanding to launch and handle Survival Craft and Rescue Boats.

The learning will enable learners to demonstrate an understanding of:

- KM-02-KT01: Processes for Taking Charge of a Survival Craft or Rescue Boat (20%)
- KM-02-KT02: Concepts relating to Operating a Survival Craft Engine (20%)
- KM-02-KT03: Managing Survivors and Craft after Abandoning Vessel (20%)
- KM-02-KT04: Procedures for Location Devices (20%)
- KM-02-KT05: Procedures and Processes relating to First Aid for Survivors (20%)

2.2 Guidelines for Topics

2.2.1 KM-02-KT01: Processes for Taking Charge of a Survival Craft or Rescue Boat (20%)

Topic elements to be covered include:

- KT0101 Survival Craft and Rescue Boats construction
- KT0102 Survival Craft and Rescue Boats characteristics
- KT0103 Survival Craft and Rescue Boats launching and recovering methods
- KT0104 Maintenance procedures

Internal Assessment Criteria

1. Describe the construction and outfit of Craft and Rescue Boats and individual items of their equipment
2. Name particular characteristics and facilities of Survival Craft and Rescue Boats
3. List various types of device used for launching Survival Craft and Rescue Boats
4. Discuss methods of launching survival craft into a rough sea
5. Name methods of recovering survival craft
6. Discuss action to be taken after leaving the vessel
7. List methods of launching and recovering rescue boats in a rough sea
8. Identify dangers associated with use of on-board release devices
9. Discuss the differences between liferafts, rescue boats and life boats and discuss the relevance to appropriate recovery procedures

(Weight 20%)

2.2.2 KM-02-KT02: Concepts relating to Operating a Survival Craft Engine (20%)

Topic elements to be covered include:

- KT0201 Survival craft engine operating methods
- KT0202 Survival craft accessories
- KT0203 Survival craft and accessories monitoring and maintenance

Internal Assessment Criteria

1. Describe methods of launching survival craft
2. Discuss methods of starting and operating a survival craft engine
3. List methods of operating accessories, and the use of the fire extinguisher provided
4. Verify expiry dates of accessories and fire equipment

5. Assist with monitoring and maintaining the condition of the survival craft and its accessories
 6. Record observations and report
- (Weight 20%)**

2.2.3 KM-02-KT03: Managing Survivors and Craft After Abandoning Vessel (20%)

Topic elements to be covered include:

- KT0301 Survival craft handling under all weather conditions
- KT0302 Appropriate equipment use
- KT0303 Food and water rations and survivor detection
- KT0304 Helicopter rescue
- KT0305 Prevention methods for hypothermia
- KT0306 Marshalling of craft and survivors
- KT0307 Survival craft beaching

Internal Assessment Criteria

1. Describe handling survival craft under all weather conditions
2. Use of painter, sea-anchor and all other equipment
3. Discuss the apportionment of food and water in survival craft
4. Describe the action taken to maximize detection and location of survival craft
5. Discuss the method applied during helicopter rescue
6. List the use of rescue boats and motor lifeboats for marshalling life rafts and rescue of survivors
7. Discuss the procedure during beaching survival craft

(Weight 20%)

2.2.4 KM-02-KT04: Location Devices (20%)

Topic elements to be covered include:

- KT0401 Radio lifesaving appliances
- KT0402 Pyrotechnic distress signals
- KT0403 Alternative locating devices

Internal Assessment Criteria

1. Review radio life-saving appliances carried in survival craft, including satellite EPIRBs and SARTs
2. Discuss pyrotechnic distress signals
3. Discuss the use of various alternative locating devices, including, but not limited to mirrors, lights, cellphones

(Weight 20%)

2.2.5 KM-02-KT05: First Aid for Survivors (20%)

Topic elements to be covered include:

- KT0501 First aid kit
- KT0502 Resuscitation techniques
- KT0503 Injured persons assistance and stabilisation
- KT0504 Treatment and prevention of hypothermia

Internal Assessment Criteria

1. Discuss the use of the first-aid kit and resuscitation techniques

2. Expand on the concept of management of injured persons, including control of bleeding and shock
3. Describe the effects of hypothermia and its prevention, including the use of protective covers and garments, immersion suits and thermal protective aids

(Weight 20%)

2.3 Provider Accreditation Requirements for the Subject

Physical Requirements:

- Classroom furniture (chairs and tables, audio & visual equipment and all other equipment conducive to a learning environment)
- Handouts and stationery (electronic consumables, pencils/paper)
- Learning material

Human Resource Requirements:

- Facilitator/learner ratio 1 to 20
- Relevant qualifications/experience
- Achieved accreditation for both facilitators and courseware from SAMSA

Legal Requirements:

- Accredited with the South African Maritime Safety Authority
- Accredited as per QCTO requirements

2.4 Critical Topics to be Assessed Externally for the Knowledge Module

- None

2.5 Exemptions

- None

3. 735101001-KM-03, Personal Survival Techniques, NQF Level 4, Credits 2 (Learning contract time 2 days)

3.1 Purpose of the Knowledge Module

The main focus of the learning in this knowledge subject is to equip qualifying learners with knowledge of survival at sea in the event of vessel abandonment.

The learning will enable learners to demonstrating an understanding of:

KM-03-KT01: Personal Survival Technique Theory(50%)

KM-03-KT02: Liferaft Theory (50%)

3.2 Guidelines for Topics

3.2.1 KM-03-KT01: Personal Survival Technique Theory (50%)

Topic elements to be covered include:

KT0101	Fundamentals of personal survival
KT0102	Vessel abandonment interventions
KT0103	Helicopter rescue procedures
KT0104	Survivor management
KT0105	Locating and communication procedures
KT0106	Fundamentals of first aid

Internal Assessment Criteria

1. List the types of emergency situations which may occur
2. State the types of lifesaving appliances normally carried on vessels
3. Identify the equipment contained within various types of survival craft
4. Define the location of personal lifesaving appliances
5. Describe the principles concerning survival, including:
 - Value of training and drills
 - Personal protective clothing and equipment
 - Need to be ready for any emergency
 - Actions to be taken when:
 - Required to abandon vessel
 - In the water
 - Aboard a survival vessel
6. Provide a brief overview of your understanding of helicopters, ranges of Search and Rescue (S.A.R.) helicopters in use, survivor capacity, winching techniques, dangers of foreign object damage (F.O.D.)
7. Explain the following:
 - Distribution of rations and water
 - Pooling of extra resources
 - The need for control of cigarettes and alcohol, and the conservation of energy
 - Avoidance of de-hydration
 - Importance of craft remaining together and in the vicinity of the foundering vessel
 - Importance of pyrotechnics and their most effective use in regard to aircraft or vessels
8. List and explain the following:
 - Survival craft first aid kit contents

- Hypothermia, immersion in water wind chill factors prevention by use of immersion suits and thermal protective aids, buddy warming in a rescue craft
- Treatment of hypothermia when rescued
- Mouth to mouth resuscitation and CPR
- Treatment for shock
- Control of bleeding and preventative measures

(Weight 50%)

3.2.2 KM-03-KT02: Liferaft Theory (50%)

Topic elements to be covered include:

KT0201	Liferaft characteristics and facilities
KT0202	Equipment carried
KT0203	Liferaft readiness maintained
KT0204	Liferaft launching procedure
KT0205	Liferaft boarding activities
KT0206	Controlling of persons on-board
KT0207	Liferaft manoeuvring and handling

Internal Assessment Criteria

1. Explain the following theory:
 - Liferaft characteristics and facilities
 - Construction
 - Material used
 - Vulnerability to damage
2. Describe the liferaft launching procedure, with specific emphasis on the use of the slip and hydrostatic release
3. Discuss the boarding of persons on liferafts
4. Clarify the procedure of controlling the persons on board the life raft
5. Describe the process of handling and manoeuvring the life raft with respect to various emergency situations

(Weight 50%)

15.3 Provider Accreditation Requirements for the Subject

Physical Requirements:

- Classroom furniture (chairs and tables, audio & visual equipment and all other equipment conducive to a learning environment)
- Handouts and stationery (electronic consumables, pencils/paper)
- Learning material

Human Resource Requirements:

- Facilitator/learner ratio 1 to 20
- Relevant qualifications/experience
- Achieved accreditation for both facilitators and courseware from SAMSA

Legal Requirements:

- Accredited with the South African Maritime Safety Authority
- Accredited as per QCTO requirements

15.4 Critical Topics to be Assessed Externally for the Knowledge Module

- None

15.5 Exemptions

- None

4. 735101001-KM-04, Personal Safety and Social Responsibilities, NQF Level 4, Credits 2 (Learning contract time 2 days)

4.1 Purpose of the Knowledge Module

The main focus of the learning in this knowledge subject is to give all persons intending to go to sea, basic training in personal safety and social responsibility.

The learning will enable learners to demonstrating an understanding of:

KM-04-KT01:	Emergency Procedures (20%)
KM-04-KT02:	Prevention of Pollution of the Marine Environment (20%)
KM-04-KT03:	Safe Working Practices (20%)
KM-04-KT04:	Communication and Human Relations (20%)
KM-04-KT05:	Fitness for Duty (20%)

4.2 Guidelines for Topics

4.2.1 KM-04-KT01: Emergency Procedures (20%)

Topic elements to be covered include:

KT0101	Types of emergency procedures
KT0102	Fundamentals of shipboard contingency plans
KT0103	Emergency signals
KT0104	Duties as per muster list
KT0105	Location of emergency equipment as per safety plan
KT0106	Appropriate drills for emergency situations
KT0107	Initial actions per emergency type

Internal Assessment Criteria

1. List the types of emergency which may occur
2. Describe the shipboard contingency plans for responses to emergencies
3. Define the emergency signals and specific duties allocated in the muster list, muster stations; and correct use of personal safety equipment
4. Identify the action to take on discovering potential emergency, including fire
5. State the actions to be taken when hearing any alarm signal
6. Explain the value of training and drills
7. List the escape routes and alarm systems
8. Discuss the importance of the safety plan and the location of safety equipment

(Weight 100%)

4.2.2 KM-04-KT02: Prevention of Pollution of the Marine Environment (20%)

Topic elements to be covered include:

KT0101	Impact of shipping on the marine environment
KT0102	Effects of operational or accidental pollution
KT0103	Pollution preventative measures
KT0104	Complexities and diversity of the marine environment

Internal Assessment Criteria

1. Discuss the impact of shipping on the marine environment and the effects of operational or accidental pollution on it
2. Name the basic environmental protection procedures

3. Describe the complexity and diversity of the marine environment
(Weight 20%)

4.2.3 KM-04-KT03: Safe Working Practices (20%)

Topic elements to be covered include:

- KT0301 Safety and protective devices for protection against hazards onboard ship
- KT0302 Precautions prior to entry into enclosed spaces
- KT0303 International measures re accident prevention and occupational health
- KT0304 Safe Working Practices for Merchant Seaman / Fishermen
- KT0305 Permit-to-work Ethos

Internal Assessment Criteria

1. State the importance of adhering to safe working practices at all times
2. Identify the safety and protective devices available to protect persons against potential hazards aboard vessel
3. State the precautions to be taken prior to entry into enclosed spaces
4. Describe the international measures concerning accident prevention and occupational health
5. Indicate the contents applicable to personal safety and social responsibility in the publication Safe Working Practices for Merchant Seaman / Fishermen published by HMSO
6. Describe your understanding of a 'permit-to-work' ethos

4.2.4 KM-04-KT04: Communication and Human Relations (20%)

Topic elements to be covered include:

- KT0401 Effective loop communication onboard
- KT0402 Principles of effective communication
- KT0403 Barriers to effective communication
- KT0404 Teams onboard
- KT0405 Legal and regulatory compliance for staff

Internal Assessment Criteria

1. Define orders and communication with others in relation to onboard duties
2. State the principles of, and barriers to effective communication between individuals and teams within the vessel
3. Explain the importance of maintaining good human and working relationship on board vessel
4. Describe basic team working principles and practice, including conflict resolution
5. Define the social responsibilities; employment conditions; individual rights and obligations

4.2.5 KM-04-KT05: Fitness for Duty (20%)

Topic elements to be covered include:

- KT0501 Drug and alcohol abuse
- KT0502 Rest, stress and fatigue and impact on performance
- KT0503 Effects of scheduling variances on seafarer fatigue

Internal Assessment Criteria

1. Define the dangers of drug and alcohol abuse

2. Explain the importance of obtaining the necessary rest
3. State the effects of sleep, schedules, and the circadian rhythm on fatigue
4. Name the effects of physical stressors on seafarers
5. List the effects of environmental stressors in and outside the vessel and their impact on seafarers
6. Identify the effects of schedule changes on seafarer fatigue

4.3 Provider Accreditation Requirements for the Subject

Physical Requirements:

- Classroom furniture (chairs and tables, audio & visual equipment and all other equipment conducive to a learning environment)
- Handouts and stationery (electronic consumables, pencils/paper)
- Learning material

Human Resource Requirements:

- Facilitator/learner ratio 1 to 20
- Relevant qualifications/experience
- Achieved accreditation for both facilitators and courseware from SAMSA

Legal Requirements:

- Accredited with the South African Maritime Safety Authority
- Accredited as per QCTO requirements

4.4 Critical Topics to be Assessed Externally for the Knowledge Module

- None

4.5 Exemptions

- None

5. 315101000-KM-05, Medical First Aid, NQF Level 3, Credits 3 (Learning contract time 5 days)

5.1 Purpose of the Knowledge Module

The learning will enable learners to demonstrate an understanding of immediate first aid requirements.

KM-05-KT01: Medical First Aid Theory (60%)

KM-05-KT02: Stabilisation and Transportation of Patients (40%)

5.2 Guidelines for Topics

5.2.1 KM-05-KT01: Medical First Aid Theory (60%)

Topic elements to be covered include:

KT0101 Medical first aid procedures

KT0102 Types of medical emergencies

Internal Assessment Criteria

1. List the contents of the Emergency First Aid kit
2. Describe the use of bandages including, the improvising of bandages where none is immediately available
3. Explain the body structure and function of:
 - Skeleton
 - Joints, muscles and tendons
 - Major organs, brain, heart, lungs, liver, etc
 - Circulatory, respiratory and nervous system
4. Identify toxic hazards onboard, including, but not limited to refrigeration gases, bunker and fuel tank fumes, diminished oxygen levels
5. Describe appropriate use of medical first aid kit content in relation to the toxic hazard identified
6. State the immediate measures to be taken when examining casualty or patient
 - Assessment of accident situation
 - Assessment of own hazards
 - Unconsciousness
 - Respiratory arrest
 - Cardiac arrest
 - Severe bleeding
 - Hypothermia

(Weight 60%)

5.2.2 KM-05-KT02: Stabilisation and Transportation of Patients (40%)

Topic elements to be covered include:

KT0201 Principles of triage

KT0202 Stabilise the patient

KT0203 Methods of transportation

Internal Assessment Criteria

1. State the immediate measures to be taken when examining casualty or patient

- Rescue of casualty
 - Notification of emergency
2. Discuss stabilising a patient with spinal injuries
 3. Explain how to treat burns, scalds and effects of heat and cold
 - Signs of burns and scalds
 - Cooling of affected areas
 - Treatment of chemical burns
 - Treatment of chemical burns of the eye
 4. Describe the treatment of fractures, dislocations and muscular injuries under all conditions
 5. Discuss medical care of rescued persons in particular the treatment and prevention of :-
 - Hypothermia
 - Immersion foot
 - Frost bite
 - Seasickness
 - Sunburn
 - Dehydration and malnutrition
 6. List the precautions to take when dealing with blood and excretions from injured persons, the risk of hepatitis and H.I.V.
 7. Define the following terms:
 - Radio medical advice
 - Pharmacology
 - Sterilization
 - Cardiac arrest, drowning and asphyxia

(Weight 40%)

5.3 Provider Accreditation Requirements for the Subject

Physical Requirements:

- Classroom furniture (chairs and tables, audio & visual equipment and all other equipment conducive to a learning environment)
- Handouts and stationery (electronic consumables, pencils/paper)
- Learning material

Human Resource Requirements:

- Facilitator/learner ratio 1 to 20
- Relevant qualifications/experience
- Achieved accreditation for both facilitators and courseware from SAMSA

Legal Requirements:

- Accredited with the South African Maritime Safety Authority
- Accredited as per QCTO requirements

5.4 Critical Topics to be Assessed Externally for the Knowledge Module

- None

5.5 Exemptions

- None

6. 735101001-KM-06, Fire Prevention and Firefighting, NQF Level 3, Credits 2 (Learning contract time 3 days)

6.1 Purpose of the Knowledge Module

The main focus of the learning in this knowledge subject is to equip qualifying learners with knowledge to describe the hazards associated with fire at sea, the principles of fire prevention, firefighting appliances and vessel-board organisation.

The learning will enable learners to demonstrating an understanding of:

KM-06-KT01: Fire Prevention Theory (60%)

KM-06-KT02: Firefighting Procedures (40%)

6.2 Guidelines for Topics

6.2.1 KM-06-KT01: Fire prevention theory (60%)

Topic elements to be covered include:

KT0101 Components of risk minimisation

KT0102 Characteristics of state of readiness

Internal Assessment Criteria

1. Describe the onboard fire-fighting organisation
2. List the location of fire-fighting appliances and emergency escape routes including the safety plan
3. Interpret requirements for emergency escape routes from engine rooms and other spaces, accommodation, work place layouts
4. List the elements of fire and explosion (the fire triangle)
5. Define types and sources of ignition
6. State flammable materials, fire hazards and spread of fire
7. Explain the need for constant vigilance
8. Describe the actions to be taken on board vessels
9. Discuss the principles and applications of fire and smoke detection systems including amongst others the:
 - Marine smoke detector
 - Zone Type detector
 - Radiation smoke detector heads
 - Flame detectors
10. Name the classification of fires and applicable extinguishing agents
(Weight 60%)

6.2.2 KM-06-KT02: Firefighting Procedures (40%)

Topic elements to be covered include:

KT0201 Firefighting equipment

KT0202 Methods for fire fighting

Internal Assessment Criteria

1. List the location and uses of firefighting equipment on board
2. Name the fireman's outfit including the minimum number required on board
3. List and describe vessel personal equipment
4. List and discuss firefighting methods

5. Describe firefighting procedures
6. Explain the use of breathing apparatus when fighting fires or effecting a rescue in a non-life sustaining or hostile atmosphere

(Weight 40%)

6.3 Provider Accreditation Requirements for the Subject

Physical Requirements:

- Classroom furniture (chairs and tables, audio & visual equipment and all other equipment conducive to a learning environment)
- Handouts and stationery (electronic consumables, pencils/paper)
- Learning material

Human Resource Requirements:

- Facilitator/learner ratio 1 to 20
- Relevant qualifications/experience
- Achieved accreditation for both facilitators and courseware from SAMSA

Legal Requirements:

- Accredited with the South African Maritime Safety Authority
- Accredited as per QCTO requirements

6.4 Critical Topics to be Assessed Externally for the Knowledge Module

- None

6.5 Exemptions

- None

7. 735101001-KM-07, Fishing Safety, NQF Level 3 (Credits: 2) (Learning contract time 2 days)

7.1 Purpose of the Knowledge Module

The main focus of the learning in this knowledge module is to build an understanding of the safety requirements for the fishing industry.

The learning will enable learners to demonstrating an understanding of:

KM-07-KT01: Principles of Fishing Safety (50%)

KM-07-KT02: Procedures of Fishing Safety (50%)

7.2 Guidelines for Topics

7.2.1 KM-07-KT01: Principles of Fishing Safety (50%)

Topic elements to be covered include:

KT0101 Ship and equipment preparation procedures for fishing operations

KT0102 The process of handling fishing gear

KT0103 Stowing procedures for the catch (fish) and general safety

Internal Assessment Criteria

1. Discuss the accepted practice for repairing, replacing, maintaining and positioning of the relevant fishing gear
2. Identify irregularities, damage or defects as appropriate to the relevant fishing gear
3. Explain procedure on how to report clearly and in good time, to his/her supervisor, any irregularities, damage or defects
4. Discuss why it is important to wear personal protective equipment at all times during fishing operations
5. Describe the processes involved in the maintenance, repair, replacement and positioning of all relevant fishing gear
6. Explain the importance of timeous reporting of any defects, damage or irregularities to supervisor
7. Discuss the safety rules applicable especially with regard to dangers caused by vessel's motion, slippery surfaces, rotating and moving equipment, ropes and wires under tension, suspended loads and fire hazards
8. Explain why irregularities are likely to occur and the action to take to protect life and property
9. List the safety rules to be followed and due diligence to be given to hazardous situations
10. Provide details on the importance of the current safety rules to the catch (fish)
11. Explain why proper catch (fish) and fishing gear stowage is important for vessel/crew safety
12. Discuss the operation of ship's valves and offal chutes and able to seal spaces from water ingress
13. Clarify the operation of bilge/factory decks pumps for removal of water from areas
14. Explain how loading/discharging operations can affect the stability of the vessel especially with regard to heeling moments from placement of gear and catch (fish)

(Weight 50%)

7.2.2 KM-07-KT02: Procedures of Fishing Safety (50%)

Topic elements to be covered include:

- KT0201 'Fish gear handling' safety process
KT0202 Catch (fish) stowage process

Internal Assessment Criteria

1. Discuss the importance that sufficient and fit personnel are available to ensure safe and efficient fishing operations
2. Explain the importance that equipment checks must be made prior to the beginning of fishing operations and to ensure that operations are carried out in accordance with safety rules
3. Clarify that reports of any irregularities, damage or defects are evaluated and rectified
4. Describe that instructions are to be given to ratings involved in stowing of catch (fish) (when appropriate) to ensure that the operation is carried out in time and according to safety rules
5. Name and discuss the construction, application and purpose of deck equipment that includes, but is not limited to, trawl gallows, gantries, power blocks, pursing blocks, winches and booms, derricks, net drums and side rollers and line and trap haulers
6. Identify the dangers associated with fishing operations such as shooting all types of fishing gear into the water, hauling fishing gear and landing the catch (fish) on board

(Weight 50%)

7.3 Provider Accreditation Requirements for the Subject

Physical Requirements:

- Classroom furniture (chairs and tables, audio & visual equipment and all other equipment conducive to a learning environment)
- Handouts and stationery (electronic consumables, pencils/paper)
- Learning material

Human Resource Requirements:

- Facilitator/learner ratio 1 to 20
- Relevant qualifications/experience
- Achieved accreditation for both facilitators and courseware from SAMSA

Legal Requirements:

- Accredited with the South African Maritime Safety Authority
- Accredited as per QCTO requirements

7.4 Critical Topics to be Assessed Externally for the Knowledge Module

- None

7.5 Exemptions

- None

**8. 735101001-KM-08, Safety Familiarisation, NQF Level 3 (Credits: 2)
(Learning contract time 2 days)**

8.1 Purpose of the Knowledge Module

The main focus of the learning in this knowledge subject is to equip qualifying learners with knowledge to be aware of onboard hazards

The learning will enable learners to demonstrating an understanding of:

KM-08-KT01: Theories of Basic Onboard Safety (50%)

KM-08-KT02: Personnel Survival Aids (50%)

8.2 Guidelines for Topics

8.2.1 KM-08-KT01: Theories of Basic Onboard Safety (50%)

Topic elements to be covered include:

KT0101 Personal safety procedures

KT0102 Lifesaving and firefighting equipment

Internal Assessment Criteria

1. Communicate with other persons on board on elementary safety matters and understand safety-information symbols and alarm signals
 - Types of alarm signal.
 - Safety symbols in common use.
2. List the appropriate action if :
 - A person falls overboard.
 - Fire or smoke is detected.
 - The fire or Abandon Vessel Signal is given
3. Identify muster and embarkation stations and the emergency escape routes
4. State what immediate action to take on encountering an accident or other medical emergency before seeking further medical assistance on board covering:
 - Basic life-saving actions
 - Stop bleeding
 - The recovery position
 - Priorities on encountering a casualty
 - Precautions to take when attending to a casualty:
 - In confined spaces
 - In the vicinity of electricity supplies
 - With the possibility of HIV
5. List the reasons for, the precautions to take and be able to operate water-tight doors, weather tight doors and fire doors, covering:
 - Powered watertight doors
 - Manual watertight and weather tight doors
 - Automated fire door

(Weight 50%)

8.2.2 KM-08-KT02: Personnel Survival Aids (50%)

Topic elements to be covered include:

KT0201 Firefighting appliances

Internal Assessment Criteria

1. Identify muster and embarkation stations and the emergency escape routes covering:
 - Muster lists
 - Clothing to be worn at emergency position, and for abandoning the vessel
2. Able to locate and don and/or use:
 - Life jackets
 - Life buoys
3. In Fire Fighting on board vessel, understand:
 - How to Raise the Alarm
 - The Fire Triangle
 - The common causes of shipboard fires
 - Operation of portable fire extinguishers
 - Use of the fire blanket

(Weight 50%)

8.3 Provider Accreditation Requirements for the Subject

Physical Requirements:

- Classroom furniture (chairs and tables, audio & visual equipment and all other equipment conducive to a learning environment)
- Handouts and stationery (electronic consumables, pencils/paper)
- Learning material

Human Resource Requirements:

- Facilitator/learner ratio 1 to 20
- Relevant qualifications/experience
- Achieved accreditation for both facilitators and courseware from SAMSA

Legal Requirements:

- Accredited with the South African Maritime Safety Authority
- Accredited as per QCTO requirements

8.4 Critical Topics to be Assessed Externally for the Knowledge Module

- None

8.5 Exemptions

- None

**9. 735101001-KM-09, Security Awareness, NQF Level 3 (Credits: 1)
(Learning contract time 1 day)**

9.1 Purpose of the Knowledge Module

The main focus of the learning in this knowledge subject is to equip qualifying learners with knowledge of the maritime security requirements.

The learning will enable learners to demonstrating an understanding of:

KM-09-KT01: Theory of Maritime Security (50%)

KM-09-KT02: Onboard Security (50%)

9.2 Guidelines for Topics

9.2.1 KM-09-KT01: Theory of Maritime Security (50%)

Topic elements to be covered include:

KT0101 Maritime security terms and definitions

KT0102 International maritime security regulations and responsibilities

Internal Assessment Criteria

1. Identify maritime security terms and definitions, including elements that may relate to piracy and armed robbery
2. Recognise international maritime security policy and responsibilities of Governments, companies and persons
3. List the maritime security levels and their impact on security measures and procedures aboard vessel and in port facilities
4. Describe security reporting procedures and security-related contingency plans

(Weight 50%)

9.2.2 KM-09-KT02: Onboard Security (50%)

Topic elements to be covered include:

KT0201 Security threats

KT0202 Security awareness and vigilance

Internal Assessment Criteria

1. Recognise techniques used to circumvent security measures
2. Identify potential security threats, including elements that may relate to piracy and armed robbery, weapons, dangerous substances and devices and awareness of the damage they can cause
3. Define the handling of security-related information and communication
4. Describe training, drill and exercise requirements under relevant conventions, codes and IMO circulars, including those relevant for anti-piracy and armed robbery

(Weight 50%)

9.3 Provider Accreditation Requirements for the Subject

Physical Requirements:

- Classroom furniture (chairs and tables, audio & visual equipment and all other equipment conducive to a learning environment)
- Handouts and stationery (electronic consumables, pencils/paper)
- Learning material

Human Resource Requirements:

- Facilitator/learner ratio 1 to 20
- Relevant qualifications/experience
- Achieved accreditation for both facilitators and courseware from SAMSA

Legal Requirements:

- Accredited with the South African Maritime Safety Authority
- Accredited as per QCTO requirements

9.4 Critical Topics to be Assessed Externally for the Knowledge Module

- None

9.5 Exemptions

- None

10. 735101002-KM-10, Fundamentals of Communications, NQF Level 3, Learning Contract Time 2 days, Credits 2

10.1 Purpose of the Knowledge Module

The main focus of the learning in this knowledge subject is to equip qualifying learners with knowledge on effective communications.

The learning will enable learners to demonstrating an understanding of:

- KM-10-KT01: Basic concepts of Written and Verbal Communication in the Maritime Industry (33.3%)
- KM-10-KT02: Essentials of Internal Communication Systems (33.3%)
- KM-10-KT03: Fundamentals for Understanding Safety Information Symbols, Signs and Alarm Signals (33.3%)

9.2 Guidelines for Topics

10.2.1 KM-10-KT01: Basic Concepts of Written and Verbal Communication in the Maritime Industry (33.3%)

Topic elements to be covered include:

- KT0101 English in written and oral form
- KT0102 Recording logbook entries
- KT0103 Reporting faults, incidents and repairs, verbally and in writing
- KT0104 Loop communication

Internal Assessment Criteria

1. Discuss importance of knowing the English language
2. Explain the relevance of recording logbook entries
3. Describe why reports need to be submitted and the circumstances under which it should be done
4. Discuss the importance of confirming instructions verbally and / or in writing
5. Explain why it is important to clarify instructions prior to performing duties

(Weight 33.3%)

10.2.2 KM-10-KT02: Essentials of Internal Communication Systems (33.3%)

Topic elements to be covered include:

- KT0201 Reporting procedures for manned and unmanned machinery spaces
- KT0202 Correct use of internal communication systems
- KT0203 Types of internal communication systems

Internal Assessment Criteria

1. Explain the reporting procedures when entering, working in and leaving an otherwise unmanned machinery space (UMS)
2. Discuss the importance of using internal communication systems correctly
3. List and explain the various types of internal communication systems and the necessity of its use when required

(Weight 33.3%)

10.2.3 KM-10-KT03: Fundamentals for Understanding Safety Information Symbols, Signs and Alarm Signals (33.3%)

Topic elements to be covered include:

- | | |
|--------|---|
| KT0301 | Communicating elementary safety matters |
| KT0302 | Safety information symbols, signs and alarm signals |

Internal Assessment Criteria

1. Discuss the importance of communicating with other persons on board on elementary safety matters
2. List and identify safety information symbols, signs and alarm signals
3. Discuss the importance of being able to communicate with a multinational crew
4. Explain the possible consequences of incorrect communication

(Weight 33.3%)

10.3 Provider Accreditation Requirements for the Subject

Physical Requirements:

- Classroom furniture (chairs and tables, audio & visual equipment and all other equipment conducive to a learning environment)
- Handouts and stationery (electronic consumables, pencils/paper)
- Learning material

Human Resource Requirements:

- Facilitator/learner ratio 1 to 20
- Relevant qualifications/experience
- Achieved accreditation for both facilitators and courseware from SAMSA

Legal Requirements:

- Accredited with the South African Maritime Safety Authority
- Accredited as per QCTO requirements

10.4 Critical Topics to be Assessed Externally for the Knowledge Module

- None

10.5 Exemptions

- None

11. 735101002-KM-11, Introduction to Applied Marine Science and Mathematics, NQF level 3 Learning Contract Time 2 day, Credits 2

11.1 Purpose of the Knowledge Module

The main focus of the learning in this knowledge module is to build an understanding of basic mathematical knowledge and skills in the marine industry.

The learning will enable learners to demonstrating an understanding of:

KM-11-KT01: Basic Mathematical and Scientific Principles (50%)

KM-11-KT02: Applied Science and Mathematics for Marine Engineering (50%)

10.2 Guidelines for Topics

11.2.1 KM-11-KT01: Basic Mathematical and Scientific Principles (50%)

Topic elements to be covered include:

- KT0101 Mathematical terminology in the marine environment
- KT0102 Science terminology in the marine environment
- KT0103 Basics of Algebra
- KT0104 Arithmetic Fundamentals

Internal Assessment Criteria

1. Explain why one needs a basic understanding of mathematics and science to work in the maritime industry
2. Discuss:
 - 1.1 The standard algebraic manipulations
 - 1.2 How to produce a graph
3. Provide basic explanations of:
 - 3.1 Perimeters and areas
 - 3.2 The areas of sectors and segments of a circle
 - 3.3 Surface areas and volumes
4. Explain the conversion of the measurement on a dipstick (linear measurement) into an equivalent volumetric quantity and, in turn, converted into a measurement of weight

(Weight 50%)

11.2.2 KM-11-KT02: Applied Science and Mathematics for Marine Engineering (50%)

Topic elements to be covered include:

- KT0201 Theory of machines
- KT0202 Basic formula interpretation

Internal Assessment Criteria

1. Describe the value of being able to identify different geometrical shapes
2. Apply basic algebraic principles to solve problems linked to these geometrical shapes
3. Discuss the application of the theory of Mechanical Advantage and Velocity Ratio when using lifting equipment

(Weight 50%)

11.3 Provider Accreditation Requirements for the Subject

Physical Requirements:

- Classroom furniture (chairs and tables, audio & visual equipment and all other equipment conducive to a learning environment)
- Handouts and stationery (electronic consumables, pencils/paper)
- Learning material

Human Resource Requirements:

- Facilitator/learner ratio 1 to 20
- Relevant qualifications/experience
- Achieved accreditation for both facilitators and courseware from SAMSA

Legal Requirements:

- Accredited with the South African Maritime Safety Authority
- Accredited as per QCTO requirements

11.4 Critical Topics to be Assessed Externally for the Knowledge Module

- None

11.5 Exemptions

- None

SECTION 3B: PRACTICAL SKILL MODULE SPECIFICATIONS

List of Practical Skill Module Specifications

- 735101001-PM-01, Assist with Navigation at the Support Level, NQF Level 3, Learning Contract Time 50h, Credits 5
- 735101001-PM-02, Handle and Stow Cargo and / or Catch (Fish) at the Support Level, NQF Level 3, Learning Contract Time 40h, Credits 4
- 735101001-PM-03, Assist with Onboard Operations and Care for Persons On Board, NQF Level 3, Learning Contract Time 50h, Credits 5
- 735101001-PM-04, Maintain and Repair at a Support Level, NQF Level 3, Learning Contract Time 40, Credits 4
- 735101001-PM-05, Assist with Mooring, Towing, Berthing and Anchoring at the Support Level, NQF Level 3, Learning Contract Time 40h, Credits 4
- 735101001-PM-06, Carry out Security Duties at the Support Level, NQF Level 3, Learning Contract Time 20h, Credits 2

1. 735101001-PM-01, Assist with Navigation at the Support Level, NQF Level 3, Learning Contract Time 50h, Credits 5

1.1 Purpose of the Practical Skill Modules

The focus of the learning in this module is on providing the learner an opportunity to assist the watchkeeping officer toward maintaining a safe navigational watch

The learner will be required to:

PM-01-PS01: Steer the Vessel and Comply with Helm Orders

PM-01-PS02: Maintain a Lookout

PM-01-PS03: Contribute to a Safe Watch

PM-01-PS04: Respond in an Emergency Situation

1.2 Guidelines for Practical Skills

1.2.1. PM-01-PS01: Steer the Vessel and Comply with Helm Orders

Scope of Practical Skill

Given work instructions, checklists, work area, case study, activity documents, any templates, forms, safety and quality principles and standard operating procedures procedure information available, the learner must be able to:

PA0101 Read a compass card

PA0102 Verbally respond to simulated helm orders

PA0103 Read and interpret rudder indicator

Applied Knowledge

AK0101 IMO Bridge procedures guide

AK0102 IMO Standard maritime navigational vocabulary

AK0103 Manufacturer's instructions

Internal Assessment Criteria

IAC0101 The marking and annotations on the compass card are correctly interpreted

IAC0102 A given compass course is responded to, by applying helm in the appropriate direction

IAC0103 Helm orders, given under simulated conditions in accordance with the Standard Maritime navigational vocabulary, are responded to verbally

1.2.2. PM-01-PS02: Maintain a Lookout

Scope of Practical Skill

Given work instructions, checklists, work area, case study, activity documents, any templates, forms, safety and quality principles and standard operating procedures procedure information available, the learner must be able to:

PA0201 Report objects observed verbally in angle and point notation from the bow

PA0202 Report verbally any sound signals heard

Applied Knowledge

AK0201 IMO Bridge procedures guide

AK0202 IMO Standard maritime navigational vocabulary

Internal Assessment Criteria

IAC0201 Objects observed are reported accurately in points relative to the bow

IAC0202 Sound signals are interpreted correctly and reported

IAC0203 Appropriate navigational vocabulary used in reporting

1.2.3. PM-01-PS03: Contribute to a Safe Watch

Scope of Practical Skill

Given work instructions, checklists, work area, case study, activity documents, any templates, forms, safety and quality principles and standard operating procedures procedure information available, the learner must be able to:

PA0301 Follow recommendations as set out in the Bridge Procedures Guide under simulated navigational conditions

PA0302 Carry out internationally accepted bridge watchkeeping practices

Applied Knowledge

AK0301 Code of Safe Working Practice for Merchant Seaman / Fishermen

AK0302 Annex to the Merchant Shipping (Safe Manning, Training and Certification) Regulations

AK0303 International Regulations for the preventions of collisions at sea (Rules, 7,13,14,15,18,19 and21) and the Annex relating to distress signals

Internal Assessment Criteria

IAC0301 Procedures that contribute to keeping a safe navigational watch are demonstrated

IAC0302 Lights and shapes recognized and reported under simulated conditions

1.2.4. PM-01-PS04: Respond in an Emergency Situation

Scope of Practical Skill

Given work instructions, checklists, work area, case study, activity documents, any templates, forms, safety and quality principles and standard operating procedures procedure information available, the learner must be able to:

PA0401 Demonstrate use of emergency equipment

PA0402 Display knowledge of common maritime emergencies and applicable procedures

PA0403 Demonstrate use of man overboard light and smoke float buoy, and location of SART, EPIRB, VHF Radio

PA0404 Practice use of pyrotechnics and line throwing appliance

Applied Knowledge

AK0401 Manufacturer's instructions

AK0402 Code of Safe Working Practice for Merchant Seaman / Fishermen

AK0403 Bridge procedures guide

AK0404 Vessels safety and fire plan

Internal Assessment Criteria

IAC0401 A lifejacket, thermal protective aids and immersion suit, are donned

IAC0402 SART, EPIRB, VHF Radio is located

IAC0403 Use of man overboard light and smoke float buoy is demonstrated

1.3 Provider Accreditation Requirements for the Practical Skill Module

Physical Requirements:

- Classroom furniture (chairs and tables, audio and visual equipment and all other equipment conducive to a learning environment)

- Hand-outs and stationery (electronic consumables, pencils/paper)
- Learning material

Human Resource Requirements:

- Facilitator/learner ratio 1 to 20
- Relevant qualifications/experience
- Accredited facilitators and assessors

Legal Requirements:

- Accredited with the South African Maritime Safety Authority
- Accredited as per QCTO requirements

1.4 Critical Topics to be Assessed Externally for the Practical Skill Module

- None

1.5 Exemptions

- None

2. 735101001-PM-02, Handle and Stow Cargo and / or Catch (Fish) at the Support Level, NQF Level 3, Learning Contract Time 40h, Credits 4

2.1 Purpose of the Practical Skill Modules

The focus of the learning in this module is on providing the learner an opportunity to assist the officer of the watch in the conduct of cargo and / or catch (fish) handling and stowage

The learner will be required to:

- PM-02-PS01: Handle Different Types of Cargo and / or Catch (Fish)
- PM-02-PS02: Assist in Stowing and Securing Cargo and / or Catch (Fish)
- PM-02-PS03: Identify and Handle Hazardous Cargo

2.2 Guidelines for Practical Skills

2.2.1. PM-02-PS01: Handle Different Types of Cargo and / or Catch (Fish)

Scope of Practical Skill

Given work instructions, checklists, work area, case study, activity documents, any templates, forms, safety and quality principles and standard operating procedures procedure information available, the learner must be able to:

- PA0101 Select cargo and / or catch (fish) handling gear and methodology according to type
- PA0102 Demonstrate in a simulated environment, the safe handling of commonly found cargo and / or catch (fish) gear
- PA0103 Inspect samples of cargo and / or catch (fish) gear visually in simulated environment

Applied Knowledge

- AK0101 Code of Safe Working Practices for Merchant Seaman / Fishermen
- AK0102 International Safety Management Code

Internal Assessment Criteria

- IAC0101 Appropriate cargo and / or catch (fish) equipment is selected for different types
- IAC0102 Commonly found cargo and / or catch (fish) gear (included but not limited to: slings, nets, strops, and hooks) are identified

2.2.2. PM-02-PS02: Assist in Stowing and Securing Cargo and / or Catch (Fish)

Scope of Practical Skill

Given work instructions, checklists, work area, case study, activity documents, any templates, forms, safety and quality principles and standard operating procedures procedure information available, the learner must be able to:

- PA0201 Assess what securing is required for various types of cargo and / or catch (fish)
- PA0202 Secure bulldog grips to form a temporary eye in steel wire rope

Applied Knowledge

- AK0201 Code of Safe Working Practices for Merchant Seaman / Fishermen
- AK0202 International Safety Management Code
- AK0203 IMDG Code
- AK0204 Relevant IMO cargo handling, stowage and securing codes
- AK0205 Vessel's cargo lashing and securing manual

Internal Assessment Criteria

- IAC0201 Appropriate securing techniques are explained for various cargoes / catch (fish)
- IAC0202 Procedures for stowing and securing different types of cargoes / catch (fish) are applied
- IAC0203 A temporary eye is fashioned using bulldog grips

2.2.3. PM-02-PS03: Identify and Handle Hazardous Cargo

Scope of Practical Skill

Given work instructions, checklists, work area, case study, activity documents, any templates, forms, safety and quality principles and standard operating procedures procedure information available, the learner must be able to:

- PA0301 Identify the type of hazardous cargo according to the labelling
- PA0302 Select personal protective equipment required according to hazardous cargo labelling
- PA0303 Select the correct firefighting equipment required for handling the hazardous cargo in a simulated environment

Applied Knowledge

- AK0301 Code of Safe Working Practices for Merchant Seaman / Fishermen
- AK0302 International Safety Management Code
- AK0303 IMDG Code

Internal Assessment Criteria

- IAC0301 Cargo correctly identified according to IMDG Code
- IAC0302 Personal protective equipment used is appropriate to cargo being handled
- IAC0303 Firefighting equipment selected correctly according to hazards identified

2.3 Provider Accreditation Requirements for the Practical Skill Module

Physical Requirements:

- Classroom furniture (chairs and tables, audio and visual equipment and all other equipment conducive to a learning environment)
- Hand-outs and stationery (electronic consumables, pencils/paper)
- Learning material
- Simulation models and equipment as described

Human Resource Requirements:

- Facilitator/learner ratio 1 to 20
- Relevant qualifications/experience
- Accredited facilitators and assessors

Legal Requirements:

- Accredited with the South African Maritime Safety Authority
- Accredited as per QCTO requirements

2.4 Critical Topics to be Assessed Externally for the Practical Skill Module

- None

2.5 Exemptions

- None

3. 735101001-PM-03, Assist with Onboard Operations and Care for Persons On Board, NQF Level 3, Learning Contract Time 50h, Credits 5

3.1 Purpose of the Practical Skill Modules

The focus of the learning in this module is on providing the learner an opportunity to assist with onboard operations and the care for people on board

The learner will be required to:

- PM-03-PS01: Identify the Use of Different Types of Lifting Equipment
- PM-03-PS02: Apply Occupational Health and Safety Precautions
- PM-03-PS03: Follow Precautions and Contribute to the Prevention of Pollution of the Maritime Environment

3.2 Guidelines for Practical Skills

3.2.1. PM-03-PS01: Identify the Use of Different Types of Lifting Equipment

Scope of Practical Skill

Given work instructions, checklists, work area, case study, activity documents, any templates, forms, safety and quality principles and standard operating procedures procedure information available, the learner must be able to:

- PA0101 Classify various types of lifting equipment and associated winches according to type and function (Cranes, derricks, gantries and cargo handling rigs)
- PA0102 Use an appropriate model incorporating a suspended load to demonstrate the principles of luffing and slewing
- PA0103 Demonstrate basic operational hand signals for lifting equipment
- PA0104 Reeve different purchases (including but not limited to gyn tackle, gun tackle, 2-fold and 3-fold purchase) to advantage and disadvantage
- PA0105 Demonstrate different types of knots, bends, hitches and splices

Applied Knowledge

- AK0101 Code of Safe Working Practice for Merchant Seaman / Fishermen
- AK0102 International Safety Management Code
- AK0103 Maritime Occupational Health and Safety Regulations

Internal Assessment Criteria

- IAC0101 Lifting equipment is described according to cargo type
- IAC0102 The principles of luffing and slewing are demonstrated
- IAC0103 Basic signals for safe operation of lifting equipment are demonstrated
- IAC0104 Different purchases are rove as required
- IAC0105 Different types of knots (reef knot, figure of 8 knot, bowline and bowline on the bight), bends (single and double sheet bend), and hitches (clove, rolling, timber, round turn and 2 half-hitches) are demonstrated
- IAC0106 Different types of splices in rope and steel wire are demonstrated (including eye splice and joining splice)

3.2.2. PM-03-PS02: Apply Occupational Health and Safety Precautions

Scope of Practical Skill

Given work instructions, checklists, work area, case study, activity documents, any templates, forms, safety and quality principles and standard operating procedures procedure information available, the learner must be able to:

- PA0201 Rigging of a painting stage and bosun's chair and wearing a safety harness
- PA0202 Demonstrate the use of gas detection equipment and oxygen meter

Applied Knowledge

AK0201	Code of Safe Working Practice for Merchant Seaman / Fishermen
AK0202	International Safety Management Code
AK0203	Maritime Occupational Health and Safety Regulations
AK0204	Manufacturer's Instructions

Internal Assessment Criteria

IAC0201	The rigging and securing of staging and a bosun's chair is demonstrated
IAC0202	The wearing of a safety harness is demonstrated
IAC0203	The use of gas detection equipment and oxygen meter is shown

3.2.3. PM-03-PS03: Follow Precautions and Contribute to the Prevention of Pollution of the Maritime Environment

Scope of Practical Skill

Given work instructions, checklists, work area, case study, activity documents, any templates, forms, safety and quality principles and standard operating procedures procedure information available, the learner must be able to:

PA0301	Dispose of onboard waste according to MARPOL requirements
PA0302	Demonstrate the use of the SOPEP kit contents in simulated environment
PA0303	Segregate an assortment of garbage in accordance with MARPOL convention

Applied Knowledge

AK0301	Code of Safe Working Practice for Merchant Seaman / Fishermen
AK0302	International Safety Management Code
AK0303	Maritime Occupational Health and Safety Regulations
AK0304	MARPOL Convention

Internal Assessment Criteria

IAC0301	Onboard waste and garbage is segregated and disposed of according to MARPOL requirements
IAC0302	The SOPEP kit contents is used in simulated environment

3.3 Provider Accreditation Requirements for the Practical Skill Module

Physical Requirements:

- Classroom furniture (chairs and tables, audio and visual equipment and all other equipment conducive to a learning environment)
- Hand-outs and stationery (electronic consumables, pencils/paper)
- Learning material

Human Resource Requirements:

- Facilitator/learner ratio 1 to 20
- Relevant qualifications/experience
- Achieved accreditation for both facilitators and courseware from SAMSA

Legal Requirements:

- Accredited with the South African Maritime Safety Authority
- Accredited as per QCTO requirements

3.4 Critical Topics to be Assessed Externally for the Practical Skill Module

- None

3.5 Exemptions

- None

4. 735101001-PM-04: Maintain and Repair at the Support Level, NQF Level 3, Learning Contract Time 40h, Credits 4

4.1 Purpose of the Practical Skill Module

The focus of the learning in this module is to enable the learner to contribute to the maintenance and repair of vessel and equipment on board.

The learner will be required to:

- PM-04-PS01: Use Painting, Lubrication and Cleaning Materials and Equipment
- PM-04-PS02: Perform Routine Maintenance and Repairs
- PM-04-PS03: Use Hand and Power Tools and Dispose of Waste Materials

4.2 Guidelines for Practical Skills

4.2.1 PM-04-PS01: Use Painting, Lubrication and Cleaning Materials and Equipment **Scope of Practical Skill**

Given work instructions, checklists, work area, case study, activity documents, any templates, forms, safety and quality principles and standard operating procedures procedure information available, the learner should be able to:

- PA0101 Select coating according to manufacturers' recommendation and surface type
- PA0102 Demonstrate use of a grease gun
- PA0103 Demonstrate cleaning and care of paint application equipment
- PA0104 Demonstrate use of paint spraying equipment

Applied Knowledge

- AK0101 Manufacturer's guide and instructions
- AK0102 Code of Safe Working Practices for Merchant Seaman / Fishermen

Internal Assessment Criteria

- IAC0101 Appropriate preparation methods are demonstrated for different surfaces and materials
- IAC0102 Coatings are selected according to manufacturer's recommendations and types of surfaces
- IAC0103 The use of a grease gun is demonstrated
- IAC0104 The use and cleaning of paint spraying equipment is demonstrated

4.2.2 PM-04-PS02: Perform Routine Maintenance and Repairs

Scope of Practical Skill

Given work instructions, checklists, work area, case study, activity documents, any templates, forms, safety and quality principles and standard operating procedures procedure information available, the learner should be able to:

- PA0201 Practice routine maintenance of a snatch block, cargo block or similar
- PA0202 Demonstrate application of lubricant to a length of steel wire rope.
- PA0203 Overhaul a cargo block

Applied Knowledge

- AK0201 Manufacturer's guide and instructions
- AK0202 Code of Safe Working Practices for Merchant Seaman / Fishermen

Internal Assessment Criteria

IAC0201	The moving parts of blocks are lubricated
IAC0202	The steel wire rope is lubricated
IAC0203	A cargo block or similar is overhauled

4.2.3 PM-04-PS03: Use Hand and Power Tools and Dispose of Waste Materials

Scope of Practical Skill

Given work instructions, checklists, work area, case study, activity documents, any templates, forms, safety and quality principles and standard operating procedures procedure information available, the learner should be able to:

- PA0301 Demonstrate the use of a chipping hammer and other equipment to remove loose scale and rust from a metal surface
- PA0302 Collect surface preparation waste for disposal according to MARPOL requirements

Applied Knowledge

- AK0301 Code of Safe Working Practices for Merchant Seaman / Fishermen

Internal Assessment Criteria

- IAC0301 Loose scale and rust is removed from a metal surface
- IAC0302 Power tools are used in accordance with the manufacturers recommendations
- IAC0303 Paint spraying equipment is used to apply coatings

4.3 Provider Accreditation Requirements for the Practical Skill Module

Physical Requirements:

- Classroom furniture (chairs and tables, audio and visual equipment and all other equipment conducive to a learning environment)
- Hand-outs and stationery (electronic consumables, pencils/paper)
- Learning material

Human Resource Requirements:

- Facilitator/learner ratio 1 to 20
- Relevant qualifications/experience
- Achieved accreditation for both facilitators and courseware from SAMSA

Legal Requirements:

- Accredited with the South African Maritime Safety Authority
- Accredited as per QCTO requirements

4.4 Critical Topics to be Assessed Externally for the Practical Skill Module

- None

4.5 Exemptions

- None

5. 735101001-PM-05, Assist with Mooring, Towing, Berthing and Anchoring at the Support Level, NQF Level 3, Learning Contract Time 40h, Credits 4

5.1 Purpose of the Practical Skill Modules

The focus of the learning in this module is on providing the learner an opportunity to contribute to the safe mooring, towing, berthing and anchoring of a vessel

The learner will be required to:

- PM-05-PS01: Contribute to Anchoring of a Vessel
- PM-05-PS02: Assist with Berthing a Vessel
- PM-05-PS03: Aid with Mooring and Towing a Vessel

5.2 Guidelines for Practical Skills

5.2.1. PM-05-PS01: Contribute to Anchoring of a Vessel

Scope of Practical Skill

Given work instructions, checklists, work area, case study, activity documents, any templates, forms, safety and quality principles and standard operating procedures procedure information available, the learner must be able to:

- PA0101 Classify the markings on an anchor cable
- PA0102 Sound appropriate bell signals for anchoring

Applied Knowledge

- AK0101 Code of Safe Working Practices for Merchant Seaman / Fishermen
- AK0102 International safety management code

Internal Assessment Criteria

- IAC0101 Markings on an anchor cable are identified
- IAC0102 Bell signals for anchoring are sounded

5.2.2. PM-05-PS02: Assist with Berthing a Vessel

Scope of Practical Skill

Given work instructions, checklists, work area, case study, activity documents, any templates, forms, safety and quality principles and standard operating procedures procedure information available, the learner must be able to:

- PA0201 Flake out a mooring rope
- PA0202 Demonstrate applying chain - and rope stoppers
- PA0203 Practise the cast of a heaving line
- PA0204 Demonstrate dipping a mooring rope onto a single bollard for independent release
- PA0205 Belay a rope on bitts

Applied Knowledge

- AK0201 Code of Safe Working Practices for Merchant Seaman / Fishermen
- AK0202 International safety management code

Internal Assessment Criteria

- IAC0201 Securing a rope to set of bits is demonstrated under simulated conditions
- IAC0202 Securing a stopper (wire, fibre rope) under simulated conditions is demonstrated
- IAC0203 A heaving line is successfully cast

IAC0204 Dipping a mooring rope eye over a single bollard is demonstrated

5.2.3. PM-05-PS03: Aid with Mooring and Towing a Vessel

Scope of Practical Skill

Given work instructions, checklists, work area, case study, activity documents, any templates, forms, safety and quality principles and standard operating procedures procedure information available, the learner must be able to:

PA0301 Flake out the tow rope in readiness for deployment

PA0302 The kenter shackle is removed from the anchor cable

Applied Knowledge

AK0301 Code of Safe Working Practices for Merchant Seaman / Fishermen

AK0302 International safety management code

Internal Assessment Criteria

IAC0301 The tow rope is flaked and ready for transfer

IAC0302 Securing a messenger to the tow-rope is demonstrated

IAC0303 The kenter shackle is dismantled and assembled

5.3 Provider Accreditation Requirements for the Practical Skill Module

Physical Requirements:

- Classroom furniture (chairs and tables, audio and visual equipment and all other equipment conducive to a learning environment)
- Hand-outs and stationery (electronic consumables, pencils/paper)
- Learning material

Human Resource Requirements:

- Facilitator/learner ratio 1 to 20
- Relevant qualifications/experience
- Achieved accreditation for both facilitators and courseware from SAMSA

Legal Requirements:

- Accredited with the South African Maritime Safety Authority
- Accredited as per QCTO requirements

5.4 Critical Topics to be Assessed Externally for the Practical Skill Module

- None

5.5 Exemptions

- None

6. 735101001-PM-06, Carry out Security Duties, NQF Level 3, Learning Contract Time 20h, Credits 2

6.1 Purpose of the Practical Skill Modules

The focus of the learning in this module is on providing the learner an opportunity to contribute to the safety and security of the vessel and crew

The learner will be required to:

PM-06-PS01: Carry out Gangway Watchkeeping Duties

PM-06-PS02: Conduct a Security Patrol in a Simulated Environment

6.2 Guidelines for Practical Skills

6.2.1. PM-06-PS01: Carry out Gangway Watchkeeping Duties

Scope of Practical Skill

Given work instructions, checklists, work area, case study, activity documents, any templates, forms, safety and quality principles and standard operating procedures procedure information available, the learner must be able to:

PA0101 Complete a security access register

PA0102 Conduct body - and bag searches

PA0103 Report any suspicious incidents and/or persons

Applied Knowledge

AK0101 ISPS Code

Internal Assessment Criteria

IAC0101 A security access register is completed and maintained in accordance with Vessel Security plan

IAC0102 A body and bag search is carried out in accordance with accepted practice and ISPS Code

IAC0103 Suspicious incidents/persons reported to Duty Officer

6.2.2 PM-06-PS02: Conduct a Security Patrol in a Simulated Environment

Scope of Practical Skill

Given work instructions, checklists, work area, case study, activity documents, any templates, forms, safety and quality principles and standard operating procedures procedure information available, the learner must be able to:

PA0201 Nature of security threat is communicated to Duty Officer

PA0202 Activate the Ship Security Alert System as per instructions

PA0203 Call emergency stations as per orders

PA0204 Start emergency shut-down of main engines as per instructions

PA0205 Follow evacuate plan, if necessary

Applied Knowledge

AK0201 ISPS Code

Internal Assessment Criteria

IAC0201 Nature of security threat is communicated to Duty Officer

IAC0202 The Ship Security Alert System is activated as per instructions

IAC0203 Emergency stations are called as per orders

IAC0204 Emergency shut-down of main engines procedures are followed

IAC0205 The ship's evacuation plan is executed, if necessary

6.3 Provider Accreditation Requirements for the Practical Skill Module

Physical Requirements:

- Classroom furniture (chairs and tables, audio and visual equipment and all other equipment conducive to a learning environment)
- Hand-outs and stationery (electronic consumables, pencils/paper)
- Learning material

Human Resource Requirements:

- Facilitator/learner ratio 1 to 20
- Relevant qualifications/experience
- Achieved accreditation for both facilitators and courseware from SAMSA

Legal Requirements:

- Accredited with the South African Maritime Safety Authority
- Accredited as per QCTO requirements

6.4 Critical Topics to be Assessed Externally for the Practical Skill Module

- None

6.5 Exemptions

- None

SECTION 3C: WORK EXPERIENCE MODULE SPECIFICATIONS

List of Work Experience Module Specifications

- 735101001-WM-01: Following Navigation Procedures at the Support Level NQF Level 3, Learning Contract Time 140h, Credits 14
- 735101001-WM-02: Complying with Cargo and / or Catch (Fish) Handling and Stowage Processes at the Support Level NQF Level 3, Learning Contract Time 120h, Credits 12
- 735101001-WM-03: Abiding by Onboard Operating Procedures and Caring for Persons On Board at the Support Level NQF Level 3, Learning Contract Time 120h, Credits 12
- 735101001-WM-04: Complying with Maintenance and Repair Processes at the Support Level NQF Level 3, Learning Contract Time 120h, Credits 12
- 735101001-WM-05: Keeping to mooring, towing, berthing and anchoring procedures NQF Level 3, Learning Contract Time 120h, Credits 12
- 735101001-WM-06: Adhering to Security Procedures NQF Level 3, Learning Contract Time 80h, Credits 8

**1. 735101001-WM-01: Following Navigation Procedures at the Support Level
NQF Level 3, Learning Contract Time 140h, Credits 14**

1.1 Purpose of the Work Experience Module

The focus of the work experience is on providing the learner an opportunity to gain exposure to work as part of the navigational watch carrying out the duties of lookout and helmsman in routine and emergency situations

The learner will be required to be exposed to:

- WM-01-WE01: Steer the Vessel and Comply with Helm Orders, also in the English Language
- WM-01-WE02: Keep a Proper Look-Out by Sight and Hearing
- WM-01-WE03: Contribute to Monitoring and Controlling a Safe Watch
- WM-01-WE04: Operate Emergency Equipment and Apply Emergency Procedures
- WM-01-WE05: Contribute to a Safe Navigational Watch

1.2 Guidelines for Work Experiences

1.2.1 WM-01-WE01: Steer the Vessel and Comply with Helm Orders, also in the English Language

Scope of Work Experience

The person will be expected to engage in the following work activities:

- WA0101 Use of magnetic and gyro compasses
- WA0102 Understand and follow helm orders
- WA0103 Change over from automatic pilot to hand and vice versa

Supporting evidence

- SE0101 Submission of completed training record book

1.2.2 WM-01-WE02: Keep a Proper Look-Out by Sight and Hearing

Scope of Work Experience

- WA0201 Identify the object including lights, shapes and sounds
- WA0202 Report the position of an object in points and degrees

Supporting Evidence

- SE0201 Submission of completed training record book

1.2.3 WM-01- WE03: Contribute to Monitoring and Controlling a Safe Watch

Scope of Work Experience

The person will be expected to engage in the following work activities:

- WA0301 Demonstrate use of onboard terms and definitions
- WA0302 Use of appropriate internal communication and alarm systems
- WA0303 Ability to understand order and communicate with the officer of the watch
- WA0304 Follow procedures for the relief, maintenance and handover of a watch
- WA0305 Interpret information required to maintain a safe watch
- WA0306 Practice of basic environmental protection procedures

Supporting Evidence

- SE0301 Submission of completed training record book

1.2.4 WM-01-WE04: Operate Emergency Equipment and Apply Emergency Procedures

Scope of Work Experience

The person will be expected to engage in the following work activities:

- WA0401 Knowledge of emergency and alarm signals
- WA0402 Knowledge of pyrotechnic distress signals, satellite EPIRBs and SARTs
- WA0403 Avoidance of false distress alerts and action to be taken in event of accidental activation

Supporting evidence

- SE0401 Submission of completed training record book

1.2.5 WM-01-WE05: Contribute to a Safe Navigational Watch

Scope of Work Experience

The person will be expected to engage in the following work activities:

- WA0501 Ability to understand orders and to communicate with the officer of the watch in matters relevant to watchkeeping duties
- WA0502 Procedures for the relief, maintenance and handover of a watch
- WA0503 Information required to maintain a safe watch

Supporting Evidence

- SE0501 Submission of completed training record book

1.3 Contextualised Workplace Knowledge

1. Company specific policies and procedures
2. International Safety Management Code
3. International Code of signals
4. Code of Safe Working Practices for Merchant Seaman / Fishermen
5. International Regulations for preventing collisions at sea
6. Master's standing orders
7. On board procedures manual

1.4 Criteria for Workplace Approval

Physical Requirements:

Context 1: Deck

- *Access to all unrestricted areas on a vessel in order for learner to have exposure to all aspects of occupational tasks*
- *Tools and equipment to conduct occupational tasks*
- *The physical resources in terms of tools, equipment, systems, conditions and interfaces that the workplace must have to ensure that learners can participate in all work activities.*

Context 2 Fishing:

- *Access to all unrestricted areas on a fishing vessel in order for learner to have exposure to all aspects of occupational tasks in line with Merchant Shipping "Safe manning, training and certification" Regulations(Able Seafarer: Deck (Fishing)*
- *Tools and equipment to conduct occupational tasks*
- *The physical resources in terms of tools, equipment, systems, conditions and interfaces that the workplace must have to ensure that learners can participate in all work activities.*

Context 2: Port Operations

- *Access to all unrestricted areas on a vessel in order for learner to have exposure to all aspects of occupational tasks*
- *Tools and equipment to conduct occupational tasks*
- *The physical resources in terms of tools, equipment, systems, conditions and interfaces that the workplace must have to ensure that learners can participate in all work activities*

Human Resource Requirements:

- Minimum requirements to include an Ordinary Seafarer Certificate that includes competencies related to navigational, operational and maintenance tasks on board a vessel at support level and minimum qualifying service (sea time) requirements as set out in the Merchant Shipping “Safe manning, training and certification” Regulations
- Support from onboard supervising officers
- Workplace coach/mentor: learner ratio 1 to 5

Legal Requirements:

- Compliant to all relevant National legislation and International Conventions and Regulations
- Accredited with relevant authority

Candidates who hold an Able seafarer qualification who wish to migrate to a different specialisation may do so provided they attain the required workplace experience as per the Merchant Shipping “Safe manning, training and certification” Regulations

1.5 Assignments to be Assessed Externally

Assignment description:

- None

Elements to be assessed:

- None

Evaluation criteria:

- None

2. 735101001-WM-02: Complying with Cargo and / or Catch (Fish) Handling and Stowage Processes at the Support Level, NQF Level 3, Learning Contract Time 120h, Credits 12

2.1 Purpose of the Work Experience Module

The focus of the work experience is on providing the learner an opportunity to gain exposure to cargo and / or catch (fish) handling, stowage and securing operations as part of a cargo and / or catch (fish) watch.

The learner will be required to be exposed to:

- WM-02-WE01 Safe Handling, Stowage and Securing of Cargoes and / or Catch (Fish) Procedures, including Dangerous, Hazardous and Harmful Substances and Liquids
- WM-02-WE02 Onboard Cargo / or Catch (Fish) Handling and Stowage Procedures
- WM-02-WE03 International Maritime Dangerous Goods Code

2.2 Guidelines for Work Experiences

2.2.1 WM-02-WE01: Safe Handling, Stowage and Securing of Cargoes and / or Catch (Fish) Procedures, including Dangerous, Hazardous and Harmful Substances and Liquids

Scope of Work Experience

The person will be expected to engage in the following work activities:

- WA0101 Safe handling of cargoes
- WA0102 Safe handling of catch (fish)
- WA0103 Safe handling of dangerous, hazardous and harmful substances
- WA0104 Identify and classify cargo according to IMDG labelling
- WA0105 Segregation of cargoes according to IMDG requirements
- WA0106 Respond to leakage and spillage

Supporting evidence

- SE0101 Submission of completed training record book

2.2.2 WM-02-WE02: Onboard Cargo / or Catch (Fish) Handling and Stowage Procedures

Scope of Work Experience

The person will be expected to engage in the following work activities:

- WA0201 Prepare appropriate cargo and / or catch (fish) handling gear for cargo operations
- WA0202 Secure, lash and tie down of cargo and / or catch (fish)
- WA0203 Stow and secure cargo and / or catch (fish) on deck and under deck
- WA0204 Secure and lash containers

Supporting evidence

- SE0201 Submission of completed training record book

2.2.3 WM-02-WE03: International Maritime Dangerous Goods Code

Scope of Work Experience

The person will be expected to engage in the following work activities:

- WA0301 Assist with the correct stowage of dangerous goods / stores
- WA0302

Ensure appropriate emergency equipment is readily available when dealing with dangerous goods / stores

Supporting Evidence

SE0301 Submission of completed training record book

2.3 Contextualised Workplace Knowledge

1. Company specific policies and procedures
2. Vessel cargo / stores handling procedures
3. Code of Safe Working Practices for Merchant Seaman / Fishermen

2.4 Criteria for Workplace Approval

Physical Requirements:

- Access to cargo / catch (fish) stowage areas and stores in order for learner to have exposure to all aspects of occupational tasks
- All equipment relevant to cargo and / or catch (fish) handling and stowage to conduct occupational tasks
- The physical resources in terms of equipment, systems, conditions and interfaces that the vessel may have to ensure that learners can participate in all work activities.

Human Resource Requirements:

- Minimum requirements to include an Ordinary Seafarer Certificate that includes competencies related to cargo and / or catch (fish) handling and stowage at support level and minimum qualifying service (sea time) requirements as set out in the Merchant Shipping “Safe manning, training and certification” Regulations
- Support from onboard supervising officers
- Workplace coach/mentor: learner ratio 1 to 5

Legal Requirements:

- Compliant to all relevant national legislation and international conventions
- Accredited with relevant authority

2.5 Additional Assignments to be Assessed Externally

Assignment description:

- None

Elements to be assessed:

- None

Evaluation criteria:

- None

3. 735101001-WM-03: Abiding by Onboard Operating Procedures and Caring for Persons On Board at the Support Level NQF Level 3, Learning Contract Time 120h, Credits 12

3.1 Purpose of the Work Experience Module

The focus of the work experience is on providing the learner an opportunity to gain exposure to onboard operations including care for persons on board at support level

The learner will be required to be exposed to:

- WM-03-WE01: Safe operation procedures of deck equipment and machinery
- WM-03-WE02: Occupational health and safety precautions
- WM-03-WE03: Precautionary measures for the prevention of pollution of the marine environment
- WM-03-WE04: Survival Craft and Rescue Boats operational procedures

3.2 Guidelines for Work Experiences

3.2.1 WM-03-WE01: Safe operation procedures of deck equipment and machinery

Scope of Work Experience

The person will be expected to engage in the following work activities:

- WA0101 Function and uses of valves and pumps, hoists, cranes, booms and related equipment
- WA0102 Function and uses of winches, windlasses, capstans and related equipment
- WA0103 Use of hatches, watertight doors, ports and related equipment
- WA0104 Use of fibre, wire ropes, cables and chains
- WA0105 Ability to use and understand basic signals for the operation of onboard equipment
Operate anchoring equipment under all conditions including emergencies
- WA0106 Rig and unrig bosun's chairs and staging
- WA0107 Rig and unrig pilot ladders, hoists, rat-guards and gangways
- WA0108 Knowledge of seamanship skills including the proper use of knots, splices and stoppers
- WA0109 Use and handling of ramps, side/bow/stern doors and elevators
Use and function of onboard pipeline systems
- WA0110 Use and rigging of cranes, derricks and winches
- WA0111 Use of hoisting and dipping flags and the main single flag signals
- WA0112

Supporting evidence

- SE0101 Submission of completed training record book

3.2.2 WM-03-WE02: Occupational health and safety precautions

Scope of Work Experience

The person will be expected to engage in the following work activities:

- WA0201 Procedures for working aloft
- WA0202 Procedures for working over the side
- WA0203 Working in enclosed spaces
- WA0204 Use of permit-to-work systems
- WA0205 Mooring line handling
- WA0206 Manual lifting and carrying techniques
- WA0207 Electrical safety
- WA0208 Mechanical safety

- WA0209 Chemical and biohazard safety
- WA0210 Use of personal safety equipment

Supporting Evidence

- SE0201 Submission of completed training record book

3.2.3 WM-03-WE03: Precautionary measures for the prevention of pollution of the marine environment

Scope of Work Experience

The person will be expected to engage in the following work activities:

- WA0301 Precautions to be taken to prevent pollution of the marine environment
- WA0302 Use and operation of anti-pollution equipment
- WA0303 Procedures for the disposal of marine pollutants

Supporting evidence

- SE0301 Submission of completed training record book

3.2.4 WM-03-WE04: Survival Craft and Rescue Boats operational procedures

Scope of Work Experience

The person will be expected to engage in the following work activities:

- WA0401 Operation of Proficiency in Survival Craft and Rescue Boats
- WA0402 Launching arrangements for lifesaving appliances
- WA0403 Use of lifesaving equipment and survival techniques

Supporting Evidence

- SE0401 Submission of completed training record book

3.3 Contextualised Workplace Knowledge

1. Company specific policies and procedures
2. International Safety Management Code
3. Code of Safe Working Practices for Merchant Seaman / Fishermen
4. International Regulations for preventing collisions at sea
5. Master's standing orders

3.4 Criteria for Workplace Approval

Physical Requirements:

- Access to all unrestricted areas on a vessel in order for learner to have exposure to all aspects of occupational tasks
- Equipment to conduct occupational tasks
- The physical resources in terms of equipment, systems, conditions and interfaces that the workplace must have to ensure that learners can participate in all work activities.

Human Resource Requirements:

- Minimum requirements to include an Ordinary Seafarer Certificate that includes competencies related to navigation at support level and minimum qualifying service (sea time) requirements as set out in the Merchant Shipping "Safe manning, training and certification" Regulations
- Support from onboard supervising officers
- Workplace coach/mentor: learner ratio 1 to 5

Legal Requirements:

- Compliant to all relevant National legislation and International Conventions
- Accredited with relevant authority

3.5 Additional Assignments to be Assessed Externally

Assignment description:

- None

Elements to be assessed:

- None

Evaluation criteria:

- None

4. 735101001-WM-04: Complying with Maintenance and Repair Processes at the Support Level NQF Level 3, Learning Contract Time 120h, Credits 12

5.

4.1 Purpose of the Work Experience Module

The focus of the work experience is on providing the learner an opportunity to gain exposure to maintenance and repair on board at support level

The learner will be required to be exposed to:

WM-04-WE01 Contribute to Onboard Maintenance and Repair

4.2 Guidelines for Work Experiences

4.2.1 WM-04-WE01: Contribute to Onboard Maintenance and Repair

Scope of Work Experience

- WA0101 Prepare surface as per recommended practices
- WA0102 Apply recommended coatings to different types of surfaces
- WA0103 Ability to use painting, lubrication and cleaning materials and equipment
- WA0104 Ability to understand and execute routine maintenance and repair procedures
- WA0105 Understand manufacturers safety guidelines and onboard instructions
- WA0106 Safe disposal of waste materials in accordance with MARPOL
- WA0107 Maintain and use hand and power tools

Supporting evidence

- SE0101 Submission of completed training record book

4.3 Contextualised Workplace Knowledge

1. Company specific policies and procedures
2. International Safety Management Code
3. Code of Safe Working Practices for Merchant Seaman / Fishermen
4. Master's standing orders

4.4 Criteria for Workplace Approval

Physical Requirements:

- Access to all unrestricted areas on a vessel in order for learner to have exposure to all aspects of occupational tasks
- Equipment to conduct occupational tasks
- The physical resources in terms of equipment, systems, conditions and interfaces that the workplace must have to ensure that learners can participate in all work activities.

Human Resource Requirements:

- Minimum requirements to include an Ordinary Seafarer Certificate that includes competencies related to navigation at support level and minimum qualifying service (sea time) requirements as set out in the Merchant Shipping "Safe manning, training and certification" Regulations
- Support from onboard supervising officers
- Workplace coach/mentor: learner ratio 1 to 5

Legal Requirements:

- Compliant to all relevant National legislation and International Conventions
- Accredited with relevant authority

4.5 Additional Assignments to be Assessed Externally

Assignment description:

- None

Elements to be assessed:

- None

Evaluation criteria:

- None

5. 735101001-WM-05: Keeping to Mooring, Towing, Berthing and Anchoring Procedures NQF Level 3, Learning Contract Time 120h, Credits 12

5.1 Purpose of the Work Experience Module

The focus of the work experience is on providing the learner an opportunity to gain exposure to berthing, anchoring and other mooring operations procedures

The learner will be required to be exposed to:

- WM-05-WE01: Berthing, Anchoring and other Mooring Operations
- WM-05-WE02: Working Knowledge of the Capacities, Safe Working Loads and Breaking Strengths of all Mooring Equipment
- WM-05-WE03: Working Knowledge of the Order of Events for Making Fast and Letting Go of Mooring, Towing Lines and Tug Lines and Wires
- WM-05-WE04: Working Knowledge of Procedures and Order of Events for the Various Uses of Anchors
- WM-05-WE05: Working Knowledge of Order of Events for the Use of Moorings and Mooring Buoys

5.2 Guidelines for Work Experiences

5.2.1 WM-06-WE01: Berthing, Anchoring and other Mooring Operations

Scope of Work Experience

The person will be expected to engage in the following work activities:

- WA0101 Prepare heaving lines, ropes, stoppers, wires, communication, lights and fenders
- WA0102 Run off ropes and flake out for use
- WA0103 Run, heave, stopper and turn up mooring lines and wires

Supporting evidence

- SE0101 Submission of completed training record book

5.2.2 WM-06-WE02: Working Knowledge of the Capacities, Safe Working Loads and Breaking Strengths of all Mooring Equipment

Scope of Work Experience

The person will be expected to engage in the following work activities:

- WA0201 Assess safe working load and breaking strain of synthetic ropes and mooring wires
- WA0202 Adhere to safe practices relating to working load and breaking strength of winches, capstans, bitts, chocks and bollards

Supporting evidence

- SE0201 Submission of completed training record book

5.2.3 WM-06-WE03: Working Knowledge of the Order of Events for Making Fast and Letting Go of Mooring, Towing Lines and Tug Lines and Wires

Scope of Work Experience

The person will be expected to engage in the following work activities:

- WA0301 Follow the correct sequence of mooring operations
- WA0302 Adhere to the correct procedure relating to unmooring operations
- WA0303 Use a messenger line in taking / giving / receiving a towing - or other heavy duty line
- WA0304 Secure and let go tug lines and wires
- WA0305 Identify and report faults in equipment
- WA0306 Tend to mooring lines, wires and gangway while alongside

Supporting evidence

- SE0301 Submission of completed training record book

5.2.4 WM-06-WE04: Working Knowledge of Procedures and Order of Events for the Various Uses of Anchors

Scope of Work Experience

The person will be expected to engage in the following work activities:

- WA0401 Clear away and walk back an anchor
- WA0402 Assist with letting go an anchor and secure when anchor is brought up
- WA0403 Assist with weighing and securing anchors for sea
- WA0404 Identify and report markings on an anchor cable
- WA0405 Display appropriate signal when anchored

Supporting evidence

- SE0401 Submission of completed training record book

5.2.5 WM-06-WE05: Working Knowledge of Order of Events for the Use of Moorings and Mooring Buoys

Scope of Work Experience

The person will be expected to engage in the following work activities:

- WA0501 Prepare for picking up a mooring hawser
- WA0502 Use messenger / pick-up lines for running cables
- WA0503 Employ chafe chains / gear and marker buoys
- WA0504 Adhere to the procedure relating to mooring buoy operations

Supporting evidence

- SE0501 Submission of completed training record book

5.3 Contextualised Workplace Knowledge

1. Company specific policies and procedures
2. International Safety Management Code
3. Code of Safe Working Practices for Merchant Seaman / Fishermen
4. Master's standing orders

5.4 Criteria for Workplace Approval

Physical Requirements:

- Access to all unrestricted areas on a vessel in order for learner to have exposure to all aspects of occupational tasks
- Equipment to conduct occupational tasks

- The physical resources in terms of equipment, systems, conditions and interfaces that the workplace must have to ensure that learners can participate in all work activities.

Human Resource Requirements:

- Minimum requirements to include an Ordinary Seafarer Certificate that includes competencies related to navigation at support level and minimum qualifying service (sea time) requirements as set out in the Merchant Shipping “Safe manning, training and certification” Regulations
- Support from onboard supervising officers
- Workplace coach/mentor: learner ratio 1 to 5

Legal Requirements:

- Compliant to all relevant National legislation and International Conventions
- Accredited with relevant authority

5.5 Additional Assignments to be Assessed Externally

Assignment description:

- None

Elements to be assessed:

- None

Evaluation criteria:

- None

6. 735101001-WM-06: Adhering to Security Procedures, NQF Level 3, Learning Contract Time 80h, Credits 8

6.1 Purpose of the Work Experience Module

The focus of the work experience is on providing the learner an opportunity to gain exposure to designated security duties as per instructions

The learner will be required to be exposed to:

- WM-06-WE01: Company and Onboard Security Procedures
- WM-06-WE02: Internationally Accepted Practices for Combatting Piracy and Armed Robbery

6.2 Guidelines for Work Experiences

6.2.1 WM-06-WE01: Company and Onboard Security Procedures

Scope of Work Experience

The person will be expected to engage in the following work activities:

- WA0101 Keep an alert watch at all times at the gangway and other access points, including careful scrutiny of the quayside and waterside area and, in particular, any movements of personnel near open decks, mooring lines fore and aft, suspicious boats etc
- WA0102 Maintaining a watch for unauthorised removal of ship's equipment and stores or any suspicious packages being left on board
- WA0103 Ensure that all visitors boarding and leaving the ship are appropriately identified
- WA0104 Inform the Officer of the Watch/SSO of any instance of persons boarding or leaving the ship other than by the gangway, e.g. leaping onto main decks, down conveyor belts etc
- WA0105 Ensure used and unused visitors' passes are kept secure at all times and not left lying in the gangway area where they can be mislaid/stolen

Supporting evidence

- SE0101 Submission of completed training record book

6.2.2 WM-06-WE02: Internationally Accepted Practices for Combatting Piracy and Armed Robbery

Scope of Work Experience

The person will be expected to engage in the following work activities:

- WA0201 Assist in preparing the vessel against possible armed attack as per international recommendations
- WA0202 Identify and communicate possible threats of piracy or armed robbery
- WA0203 Follow instructions as per the identified threat, as appropriate
- WA0204 Participate in attack-related drills on board

Supporting evidence

- SE0101 Submission of completed training record book

6.3 Contextualised Workplace Knowledge

1. Company specific policies and procedures
2. International Vessel and Port Security Code

3. Master's standing orders
4. Vessel security plan

6.4 Criteria for Workplace Approval

Physical Requirements:

- Access to all unrestricted areas on a vessel in order for learner to have exposure to all aspects of occupational tasks
- Equipment to conduct occupational tasks
- The physical resources in terms of equipment, systems, conditions and interfaces that the workplace must have to ensure that learners can participate in all work activities.

Human Resource Requirements:

- Minimum requirements to include an Ordinary Seafarer Certificate that includes competencies related to navigation at support level and minimum qualifying service (sea time) requirements as set out in the Merchant Shipping "Safe manning, training and certification" Regulations
- Support from onboard supervising officers
- Workplace coach/mentor: learner ratio 1 to 5

Legal Requirements:

- Compliant to all relevant National legislation and International Conventions
- Accredited with relevant authority

6.5 Additional Assignments to be Assessed Externally

Assignment description:

- None

Elements to be assessed:

- None

Evaluation criteria:

- None