No. 613

13 July 2007



#### SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)

In accordance with Regulation 24(c) of the National Standards Bodies Regulations of 28 March 1998, the Standards Generating Body (SGB) for

#### **Maritime Defence**

registered by Organising Field 08, Law Military Science and Security, publishes the following Qualification and Unit Standards for public comment.

This notice contains the titles, fields, sub-fields, NQF levels, credits, and purpose of the Qualification and Unit Standards. The full Qualification and Unit Standards can be accessed via the SAQA web-site at <u>www.saqa.org.za</u>. Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, SAQA House, 1067 Arcadia Street, Hatfield, Pretoria.

Comment on the Qualification and Unit Standards should reach SAQA at the address below *and no later 13 August 2007.* All correspondence should be marked Standards Setting – Maritime Defence and addressed to

The Director: Standards Setting and Development SAQA *Attention: Mr. D. Mphuthing* Postnet Suite 248 Private Bag X06 Waterkloof 0145 or faxed to 012 – 431-5144 e-mail: dmphuthing@saqa.org.za

R. S. BHIKHA DIRECTOR: STANDARDS SETTING AND DEVELOPMENT



QUALIFICATION: National Certificate: Warship Command and Control

| SAQA QUAL ID         | QUALIFICATION TITLE                               |                   |                            |  |
|----------------------|---|-------------------|----------------------------|--|
| 58783                | National Certificate: Warship Command and Control |                   |                            |  |
| ORIGINATOR           | PROVIDER  |                   |                            |  |
| SGB Maritime Defence |   |                   |                            |  |
| QUALIFICATION TYPE   | FIELD   | SUBFIELD          |                            |  |
| National Certificate | 8 - Law, Military Science<br>and Security         | Safety in Society |                            |  |
| ABET BAND            | MINIMUM CREDITS                                   | NQF LEVEL         | QUAL CLASS                 |  |
| Undefined            | 189   | Level 6           | Regular-Unit Stds<br>Based |  |

### PURPOSE OF THE QUALIFICATION

Purpose:

This qualification is aimed at people who are working within an Officer Training Programme with a view to being recognised as fully-fledged Commanding Officers. Typically, they will be people in SAN training schemes, developing their skills towards this qualification. Learners may also already be warfare officers or Executive Officers who wish to develop their skills for command. In particular this qualification will be useful for:

- Warship Safety Officers (Bridge Watch):
- Warfare and Principal Warfare Officers (Surface or sub-surface).

This qualification is designed to be flexible and accessible so that people are able to demonstrate the competencies required to work safely and productively at a strategic level in a surface operations environment. Recipients of this qualification will have knowledge and skills to assume command of a warship.

Recipients of this qualification will be able to:

- Communicate effectively in a leadership role.
- Navigate and/or handle the ship.
- Execute maritime operations.
- Manage Damage Control and Safety Activities.
- Demonstrate understanding of the legal aspects of maritime operations.

• Demonstrate understanding of SANDF regulations and Force Preparation procedures pertaining to warship management.

Commanding Officers will carry out their role within the context of:

- Set SAN operational procedures.
- Given administration systems.
- Given Naval doctrine.
- Given tactical procedures.
- The framework of the Law of Armed Conflict (LOAC) and current rules of engagement.

Rationale:

Source: National Learners' Records Database

Qualification 58783

The Defence Force has taken the decision to align its training of personnel to qualifications registered on the NQF. The SA Navy (SAN) wishes to provide for the recognition of key clusters of leadership and management competencies, which coincide with SAN command requirements.

The majority of the learners for this qualification are likely to have completed the qualifications and training dealing with warship safety management and bridge watch-keeping within a naval context and, one of the areas of specialisation (anti-air, anti-surface and sub-surface warfare) within warfare operations management. This qualification will give learners the opportunity to develop and balance their practical skills with the essential knowledge needed to earn a formal qualification in Warship Command and Control.

Learners may either access this qualification as warfare and principal warfare officers, or as watchkeepers and officers with extensive experience on board, but without extensive practical operational knowledge and skill, and this qualification provides for this eventuality.

A decision has also been made that the SAN must comply with, or exceed, international maritime standards. Traditionally, SAN training has been of a high standard in defined areas, but has not always produced people capable of working at the levels required by international maritime license requirements for ship Masters. The qualification recognises and makes provision for these additional requirements.

In addition, the policy of the Defence Force, as part of a broader skills development process in South Africa, wishes to provide for mobility of its personnel (Learners) and for portability of competencies and learning obtained from one qualification to another where at all possible.

A further consideration is that, for transformation purposes, large numbers of generally poorly educated and trained people need access to high quality learning and assessment opportunities if they are to meet the requirements of the maritime sector in general, and the SAN in particular. The possibilities for incremental learning, which builds on generic officer training, must be created if the SAN is to make the equitable distribution of skills a reality. This qualification will assist the SAN to meet this objective.

Finally, there are people who have been working in the SAN for some time, and who have gained the additional skills and expertise required through systematic on-the-job training. This qualification and its constituent unit standards can make an invaluable contribution to personal and SAN skills development by providing for the recognition of the skills gained in this manner, through a systematic RPL process.

In summary, the rationale for this qualification and its constituent unit standards is to:

• Describe the standard required for competent command performance in the Defence Force and international arena.

• Provide clear guidelines and "targets" for SAN and other training providers, which also promotes accountability.

• Provide a means to recognise prior learning in a formal way.

• Provide access and progression via coherent learning pathways for mariners and officer trainees wishing to consider a career in naval warfare.

• Provide access to learners formerly denied opportunities for a career in maritime defence, which in turn promotes personal (and thus national) skills development.

#### **RECOGNIZE PREVIOUS LEARNING?**

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#### LEARNING ASSUMED IN PLACE

• It is assumed that learners are competent in Mathematics and Science at NQF Level 4.

Source: National Learners' Records Database

Qualification 58783

06/07/2007

Page 2

• The international Language in the maritime sector (Navy and merchant marine) is English and it is assumed that Learners are competent in English at NQF Level 4.

Recognition of Prior Learning:

There is a critical need in the SAN to identify people from different demographic and gender backgrounds who have a sound foundation in seamanship and warship safety management (alongside and bridge watchkeeping), and who have begun to specialise in one of the aspects of warship operations management (air, surface and sub-surface). This qualification will provide them with the opportunity to have the specific and complex skills demanded of those who manage warships at a strategic level recognised within a safety conscious and highly regulated sector.

This qualification also recognises that there may be learners who are already warfare officers or Executive Officers with extensive experience of on-board operation, and who would like existing skills recognised so that they can gain access to further development opportunities, and provides for this eventuality.

Evidence can be presented in various ways, including international and/or previous local qualifications, products, reports, testimonials mentioning functions performed, work records, portfolios, videos of practice and performance records.

All such evidence will be judged in accordance with the general principles of assessment described above and the requirements for integrated assessment.

This qualification can therefore be obtained in whole or in part through a process of RPL.

Access to the Qualification:

Access to this s qualification is open to all learners in possession of a National Senior Certificate with Mathematics and Science, or equivalent qualification.

It is preferable that learners first complete a Watchkeeping Certificate or a Qualification in Warship Operations Management.

#### QUALIFICATION RULES

Fundamental:

• All fundamental Unit Standards totalling 15 credits are compulsory.

Core:

• All Core unit standards totalling 171 credits are compulsory.

Elective:

• Learners are to choose unit standards totalling 3 credits from the unit standards listed as elective.

• To be awarded the whole qualification, learners must complete the unit standards specified above and obtain a minimum of 187 credits.

• Should learners exit the qualification without completing the whole qualification, recognition may be given for unit standards successfully completed.

#### **EXIT LEVEL OUTCOMES**

1. Communicate effectively in a leadership role.

Source: National Learners' Records Database

Qualification 58783

- 2. Navigate the ship.
- 3. Execute maritime operations.
- Manage safety and damage control activities.
- 5. Demonstrate an understanding of the legal aspects of a command role.

6. Demonstrate understanding of SANDF regulations and Force Preparation procedures pertaining to warship management.

Critical Cross-Field Outcomes:

• This qualification addresses all the Critical Cross-Field Outcomes, as detailed in the associated unit standards.

#### ASSOCIATED ASSESSMENT CRITERIA

Associated Assessment Criteria for Exit Level Outcome 1:

• A range of communication principles, strategies and processes are applied to support effective communication and enhance meaningful interaction with key personnel.

Associated Assessment Criteria for Exit Level Outcome 2:

• Navigational planning and execution is directed, within the constraints of prevailing weather conditions and sea state, in such a way that the ship's position is consistent with plan at all times.

• The ship is manoeuvred effectively and safely in a range of specific operations.

Associated Assessment Criteria for Exit Level Outcome 3:

 Planning of all missions, military and peacekeeping support, is done thoroughly and provides an effective basis for decision-making and execution.

• Missions are executed so as to comply with legislative requirements and international agreements and regulations.

Associated Assessment Criteria for Exit Level Outcome 4:

• Damage is managed in a manner that supports the safe and effective operation of the platform within the bounds of acceptable risk.

• Actions to limit, control and/or repair damage are decisive and effective, in accordance with established procedures.

Associated Assessment Criteria for Exit Level Outcome 5:

• Political implications of actions are appreciated in relation to mission and/or peace support operations.

- Actions are taken that are consistent with international agreements, treaties and regulations.
- Command role is executed in ways that support South Africa's position in the region.

Associated Assessment Criteria for Exit Level Outcome 6:

• Knowledge of vessel systems and capabilities is accurate and sufficient to support decisionmaking with respect to the principles of fight, move and float.

Qualification 58783

06/07/2007

Page 4

The ship and ship systems are monitored against agreed criteria for the required state of readiness, and actions maintain or improve readiness state, as required.
Planning and preparation is thorough and makes provision for effective operations in accordance with established procedures.

Integrated Assessment:

Assessment should take place within the context of:

- Given Quality Assurance policies, procedures and processes.
- A guided and supported learning environment.

Assessment will take place according to the detailed specifications indicated in the unit standards associated with each exit level outcome (see "associated unit standards" above).

Over and above the achievement of the specified unit standards, evidence of integration will be required as per the following broad criteria, all within the context of an active learning environment.

Assessors should note that the evidence of integration could well be presented by learners when being assessed against the unit standards-thus there should not necessarily be separate assessments for each unit standard and then further assessment for integration. Well designed assessments should make it possible to gain evidence against each unit standard while at the same time gain evidence of integration.

Assessment should be in accordance with the following general and specific principles:

• The initial assessment activities should focus on gathering evidence in terms of the main outcomes expressed in the titles of the unit standards to ensure assessment is integrated rather than fragmented. Where assessment at title level is unmanageable, then the assessment can focus on each specific outcome, or groups of specific outcomes.

• Evidence must be gathered across the entire range specified in each unit standard, as applicable. Assessment activities should be as close to the real performance as possible, and where simulations or role-plays are used, there should be supporting evidence to prove that the candidate is able to perform in the real situation.

• All assessments should be conducted in accordance with the following universally accepted principles of assessment:

• Use appropriate, fair and manageable methods that are integrated into real work-related or learning situations.

• Judge evidence on the basis of its validity, currency, authenticity and sufficiency.

Ensure assessment processes are systematic, open and consistent.

#### INTERNATIONAL COMPARABILITY

The STCW Code (Seafarer's Training, Certification and Watchkeeping Code) as adopted by the 1995 Conference of the International Maritime Organization recognises the specific roles and responsibilities of a Master. It lays down duties and responsibilities and provides standards and criteria for the learning and assessment of Masters of vessels of 500 gross tonnage or more. Signatories to the Convention include some 71 countries, amongst them leading seafaring nations such as: Argentina, Australia, Canada, China, Denmark, Finland, France, Germany, India, Japan, Netherlands, New Zealand, Norway, Portugal, Russian Federation, South Africa, Spain, Sweden, and the United Kingdom.

Areas of specified competence include:

Source: National Learners' Records Database

Qualification 58783

06/07/2007

- Plan a voyage and conduct navigation.
- Determine position and resultant accuracy of the position fix by any means.
- Determine and allow for compass errors.
- · Coordinate search and rescue programmes.
- Establish watchkeeping arrangements and procedures.
- Maintain safe navigation through the use of radar and ARPA and modern navigation systems to assist decision-making.
- Forecast weather and oceanographic conditions.
- Respond to navigational emergencies.
- Manoeuvre and handle a ship in all conditions.
- Operate remote controls of propulsion plants and engineering systems and services.
- Monitor the loading, stowage, securing, care during the voyage and the unloading of cargoes.
- Inspect and report defects and damage to cargo spaces, hatch covers and ballast tanks.
- Plan and ensure the safe loading, stowage, securing, care during the voyage and the unloading of cargoes.
- Assess reported defects and damage to cargo spaces, hatch covers and ballast tanks and take appropriate action.
- Carriage of dangerous goods.
- Control trim, stability and stress.

• Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea and the protection of the marine environment.

• Maintain safety and security of the ship's crew and passengers and the operational condition of life-saving, fire-fighting and other safety systems.

- Develop emergency and damage control plans and handle emergency situations.
- Organise and manage the crew.
- Organise and manage the provision of medical care on board.

United States:

The US Navy Officer Training curriculum includes the following areas:

• Engineering: Candidates are introduced to the fundamentals of naval propulsion plants. These include steam, nuclear, gas turbine and diesel. In addition, candidates will be introduced to the basic theories of electrical distribution systems, hydraulic systems, evaporator plants, air conditioners and refrigeration systems.

• Military Indoctrination: During military indoctrination candidates are taught basic military customs and courtesies, basic uniform assembly and requirements, inspection procedures and training requirements.

• Naval History: Subjects include the history of the Navy from the Revolutionary War to the present, theories on sea power, the influence of geography, the elements of strategic deterrence, maritime strategy and a quantitative and qualitative comparison of US and foreign navies.

• Navigation: Navigation training consists of dead reckoning, coastal piloting, Rules of the Road and electronic navigation. Candidates are required to plot simulated movements and positions of a ship at sea. Candidates receive practical application training aboard a yard patrol (YP) training ship in the Seamanship and Navigation phase of training.

• Seamanship: Seamanship training at OCS familiarizes candidates with naval terminology, equipment and various deck operations. Candidates are acquainted with fiber lines, wire ropes, anchors and anchor chains as well as the supervision of their safe use. The different types of rigs used by ships under way in refueling and replenishment at sea are introduced. Candidates learn to use the maneuvering board and how to put this knowledge to practical use when sailing.

| Source: National Learners' Records Database | Qualification 58783 | 06/07/2007 | Page 6 |
|---|---------------------|------------|--------|
|---|---------------------|------------|--------|

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• Damage Control: The damage control curriculum is designed to familiarize candidates with the types of damage, which can occur in the naval environment due to accidents, warfare and nautical disasters. Damage control also includes instruction in fire fighting theory and prevention of different kinds of fires common to sea, shore and air commands. It also includes principles of chemical, biological and radiological warfare defense. Practical demonstrations of flooding control are given in a mock-up of a shipboard space.

• Naval Leadership: Subjects include leadership qualities, motivational theories, team building, management skills, decision-making, goal setting and action planning, and communication processes and public speaking skills. Candidates have many opportunities through practical application to demonstrate leadership skills.

• Division Officer: Subjects include military rank structure, performance evaluations, educational programs, enlisted records, classified material handling, naval correspondence, officer designations, promotions, junior officer administrative duties, pay and allowances and advancement.

• Military Law: Subjects introduced include the Military Code of Conduct, The Geneva Convention, the Uniform Code of Military Justice, investigations, non-judicial punishment, court-martial procedures, apprehensions, jurisdiction, pretrial restraints, administrative discharges and claims.

• Naval Warfare: During this phase candidates study the equipment, shipboard spaces and weapons used in various operations. Amphibious, Mine, Strike, Electronic, Submarine, Surface, and Air warfare tactics will be studied. Candidates also examine the problems of detection and learn the weapons systems used in various types of combat.

• Special Emphasis Program: Subjects include suicide awareness and prevention, Drug and Alcohol Program Advisor (DAPA), Human Resources and Safety Programs, counterespionage and AIDS briefings.

#### Conclusion:

The particular qualification in question is one that falls within a highly regulated sector where all parties operating ocean-going vessels have set and agreed to comply with standards key roles charged with the safety of shipping.

The SAN's own approach is that the first stage of training for Commanding Officers should comply with STCW codes, and care has been taken to align this qualification with the provisions of the Code.

The proposed National Certificate: Warship Command and Control NQF Level 6 complies with the requirements of the IMO STCW Code, and is similar to qualifications operating in allied Navies internationally. The Royal Navy are regarded as the leaders, and the SAN has closely followed the British approach.

#### **ARTICULATION OPTIONS**

The qualifications for the navy have yet to be developed, so articulation at present is limited but includes qualifications in the merchant marine.

Horizontal articulation is possible with the following qualification:

• National Diploma: Maritime Studies, NQF Level 6.

Vertical articulation is possible with the following qualifications:

Source: National Learners' Records Database

Qualification 58783

06/07/2007

• National Higher Diploma: Maritime Studies, NQF Level 7.

#### **MODERATION OPTIONS**

• Providers offering learning towards this qualification or the component unit standards must be accredited by the relevant ETQA.

 Moderation of assessment will be overseen by the relevant ETQA according to moderation principles and the agreed ETQA procedures.

#### CRITERIA FOR THE REGISTRATION OF ASSESSORS

Assessors must be:

• Registered as assessors with the relevant ETQA.

• Be in possession of a relevant qualification at NQF level 7 or have at least 3 years relevant experience in the maritime sector.

#### NOTES N/A

#### UNIT STANDARDS

|          | ID     | UNIT STANDARD TITLE   | LEVEL   | CREDITS |
|----------|--------|---|---------|---------|
| Core     | 244540 | Conceive and direct the required state of operational<br>readiness  | Level 5 | 4       |
| Core     | 244546 | Control trim, stability and stress  | Level 5 | 6       |
| Core     | 117985 | Demonstrate an understanding of the Law of Armed<br>Conflict during multi-national operations               | Level 5 | 10      |
| Core     | 118027 | Demonstrate an understanding of the planning process at<br>the operational level                            | Level 5 | 13      |
| Core     | 120040 | Demonstrate understanding of the concepts of operational<br>command and control                             | Level 5 | 2       |
| Core     | 244524 | Demonstrate understanding vessel systems and<br>capabilities  | Level 5 | 6       |
| Core     | 244532 | Determine position of the vessel and the accuracy of the<br>resultant position                              | Level 5 | 6       |
| Core     | 244525 | Ensure compliance with pollution prevention measures  | Level 5 | 4       |
| Core     | 244538 | Establish health and safety systems for vessel and crew   | Level 5 | 6       |
| Core     | 244528 | Establish watchkeeping arrangements and procedures  | Level 5 | 6       |
| Core     | 244536 | Forecast weather and oceanographic conditions   | Level 5 | 10      |
| Core     | 244526 | Manage safe navigation through the use of radar and<br>other navigational aids                              | Level 5 | 4       |
| Core     | 244530 | Monitor compliance with legislative requirements and<br>measures to ensure safety of life at sea            | Level 5 | 4       |
| Core     | 244549 | Operate remote controls of propulsion plant and<br>engineering systems and procedures                       | Level 5 | 4       |
| Core     | 244533 | Conduct military missions in accordance with national and<br>naval doctrine                                 | Level 6 | 8       |
| Core     | 244547 | Develop emergency and damage control plans and<br>handle emergency situations                               | Level 6 | 6       |
| Core     | 244544 | Direct damage control activities  | Level 6 | 8       |
| Core     | 244548 | Execute a peace support operation   | Level 6 | 6       |
| Core     | 244542 | Manage vessel operations  | Level 6 | 10      |
| Core     | 244535 | Manoeuvre and handle the ship under all conditions  | Level 6 | 16      |
| Core     | 244510 | Organise and manage the crew  | Level 6 | 8       |
| Core     | 244545 | Organise and manage the provision of medical care on<br>board a vesse!                                      | Level 6 | 6       |
| Core     | 244531 | Plan voyage and conduct navigation  | Level 6 | 8       |
| Core     | 244527 | Respond to navigational emergencies   | Level 6 | 10      |
| Elective | 114846 | Demonstrate an understanding of the historical, political,<br>social and economic realities of South Africa | Level 5 | 10      |
| Elective | 15093  | Demonstrate insight into democracy as a form of<br>governance and its implications for a diverse society    | Level 5 | 5       |
| Elective | 114862 | Explain South Africa's role in Africa and SADC countries  | Level 5 | 3       |

Source: National Learners' Records Database

Qualification 58783

06/07/2007 Page 8

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| ID     | UNIT STANDARD TITLE  | LEVEL  | CREDITS  |
|--------|--|--|--|
| 244520 | Manage a hydrographic survey   | Level 5  | 6  |
| 244522 | Control, conduct and respond to search and rescue<br>operation                                   | Level 6  | 8  |
| 115792 | Access, process, adapt and use data from a wide range of texts                                   | Level 5  | 5  |
| 115789 | Sustain oral interaction across a wide range of contexts<br>and critically evaluate spoken texts | Level 5  | 5  |
| 115790 | Write and present for a wide range of purposes, audiences and contexts                           | Level 5  | 5  |
|        | 244520<br>244522<br>115792<br>115789   | 244520       Manage a hydrographic survey         244522       Control, conduct and respond to search and rescue operation         115792       Access, process, adapt and use data from a wide range of texts         115789       Sustain oral interaction across a wide range of contexts and critically evaluate spoken texts         115790       Write and present for a wide range of purposes, | 244520       Manage a hydrographic survey       Level 5         244522       Control, conduct and respond to search and rescue operation       Level 6         115792       Access, process, adapt and use data from a wide range of texts       Level 5         115789       Sustain oral interaction across a wide range of contexts and critically evaluate spoken texts       Level 5         115790       Write and present for a wide range of purposes,       Level 5 |

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Qualification 58783

06/07/2007



#### Determine position of the vessel and the accuracy of the resultant position

| SAQA US ID             | UNIT STANDARD TITLE           | UNIT STANDARD TITLE   |         |  |  |
|------------------------|-------------------------------|---|---------|--|--|
| 244532                 | Determine position of the ves | Determine position of the vessel and the accuracy of the resultant position |         |  |  |
| ORIGINATOR             |                               | PROVIDER  |         |  |  |
| SGB Maritime Defer     | nce                           |   |         |  |  |
| FIELD                  |                               | SUBFIELD  |         |  |  |
| 8 - Law, Military Scie | ence and Security             | Safety in Society   |         |  |  |
| ABET BAND              | UNIT STANDARD TYPE            | NQF LEVEL   | CREDITS |  |  |
| Undefined              | Regular                       | Level 5   | 6       |  |  |

#### SPECIFIC OUTCOME 1

Determine the position of a vessel.

#### **SPECIFIC OUTCOME 2**

Allow for compass errors in the fixing of a vessel's position.

#### **SPECIFIC OUTCOME** 3

Record a vessel's position.



#### UNIT STANDARD:

# Monitor compliance with legislative requirements and measures to ensure safety of life at sea

| SAQA US ID             | UNIT STANDARD TITLE                                    | UNIT STANDARD TITLE  |         |  |  |
|------------------------|--|--|---------|--|--|
| 244530                 | Monitor compliance with legis<br>safety of life at sea | Monitor compliance with legislative requirements and measures to ensure<br>safety of life at sea |         |  |  |
| ORIGINATOR             |  | PROVIDER   |         |  |  |
| SGB Maritime Defer     | nce  |  |         |  |  |
| FIELD                  |  | SUBFIELD   |         |  |  |
| 8 - Law, Military Scie | ence and Security                                      | Safety in Society  |         |  |  |
| ABET BAND              | UNIT STANDARD TYPE                                     | NQF LEVEL  | CREDITS |  |  |
| Undefined              | Regular  | Level 5  | 4       |  |  |

#### SPECIFIC OUTCOME 1

Monitor vessel operations and maintenance procedures.

#### **SPECIFIC OUTCOME 2**

Identify and rectify non-compliance with legislative requirements and measures.

#### **SPECIFIC OUTCOME 3**

Maintain required certification of shipboard items and equipment.

#### **SPECIFIC OUTCOME 4**

Maintain documentation related to legislative requirements.



#### Establish watchkeeping arrangements and procedures

| SAQA US ID             | UNIT STANDARD TITLE          | UNIT STANDARD TITLE                                |         |  |  |
|------------------------|------------------------------|--|---------|--|--|
| 244528                 | Establish watchkeeping arrar | Establish watchkeeping arrangements and procedures |         |  |  |
| ORIGINATOR             |                              | PROVIDER   |         |  |  |
| SGB Maritime Defen     | ce                           |  |         |  |  |
| FIELD                  |                              | SUBFIELD   |         |  |  |
| 8 - Law, Military Scie | nce and Security             | Safety in Society                                  |         |  |  |
| ABET BAND              | UNIT STANDARD TYPE           | NQF LEVEL  | CREDITS |  |  |
| Undefined              | Regular                      | Level 5  | 6       |  |  |

#### **SPECIFIC OUTCOME 1**

Establish bridge and/or engine room working systems and procedures.

#### **SPECIFIC OUTCOME 2**

Manage the bridge and/or engine room teams.

#### **SPECIFIC OUTCOME 3**

Evaluate watchkeeping and procedures.



#### UNIT STANDARD:

#### Manage safe navigation through the use of radar and other navigational aids

| SAQA US ID            | UNIT STANDARD TITLE                    |   |         |  |
|-----------------------|--|---|---------|--|
| 244526                | Manage safe navigation throu           | Manage safe navigation through the use of radar and other navigational aids |         |  |
| ORIGINATOR            |  | PROVIDER  |         |  |
| SGB Maritime Defe     | nce                                    |   |         |  |
| FIELD                 | SUBFIELD                               |   |         |  |
| 8 - Law, Military Sci | Science and Security Safety in Society |   |         |  |
| ABET BAND             | UNIT STANDARD TYPE                     | NQF LEVEL   | CREDITS |  |
| Undefined             | Regular                                | Level 5   | 4       |  |

#### SPECIFIC OUTCOME 1

Operate electronic navigational systems.

#### **SPECIFIC OUTCOME 2**

Interpret and evaluate information from electronic navigational systems.

#### **SPECIFIC OUTCOME 3**

Maintain navigational records.



#### Ensure compliance with pollution prevention measures

| SAQA US ID             | UNIT STANDARD TITLE                    | UNIT STANDARD TITLE                                  |         |  |  |
|------------------------|--|--|---------|--|--|
| 244525                 | Ensure compliance with pollu           | Ensure compliance with pollution prevention measures |         |  |  |
| ORIGINATOR             |  | PROVIDER   |         |  |  |
| SGB Maritime Defer     | nce                                    |  |         |  |  |
| FIELD                  |  | SUBFIELD   |         |  |  |
| 8 - Law, Military Scie | Science and Security Safety in Society |  |         |  |  |
| ABET BAND              | UNIT STANDARD TYPE                     | NQF LEVEL  | CREDITS |  |  |
| Undefined              | Regular                                | Level 5  | 4       |  |  |

#### **SPECIFIC OUTCOME 1**

Maintain compliance with legislative requirements for protection of the marine environment.

#### **SPECIFIC OUTCOME 2**

Implement antipollution procedures.

#### **SPECIFIC OUTCOME 3**

Maintain documentation related to legislative requirements for the protection of the environment.



#### UNIT STANDARD:

#### Demonstrate understanding vessel systems and capabilities

| SAQA US ID            | UNIT STANDARD TITLE       | UNIT STANDARD TITLE                                       |         |  |  |
|-----------------------|---------------------------|---|---------|--|--|
| 244524                | Demonstrate understanding | Demonstrate understanding vessel systems and capabilities |         |  |  |
| ORIGINATOR            |                           | PROVIDER  |         |  |  |
| SGB Maritime Defe     | nce                       |   |         |  |  |
| FIELD                 |                           | SUBFIELD  |         |  |  |
| 8 - Law, Military Sci | ence and Security         | ecurity Safety in Society                                 |         |  |  |
| ABET BAND             | UNIT STANDARD TYPE        | NQF LEVEL   | CREDITS |  |  |
| Undefined             | Regular                   | Level 5   | 6       |  |  |

#### SPECIFIC OUTCOME 1

Demonstrate understanding of the propulsion system.

#### **SPECIFIC OUTCOME 2**

Demonstrate understanding of auxiliary system capabilities and limitations.

#### SPECIFIC OUTCOME 3

Demonstrate understanding of water, fuel, ventilation and disposal systems.

#### **SPECIFIC OUTCOME 4**

Demonstrate understanding of weapons electrical system.



#### UNIT STANDARD:

#### Manage a hydrographic survey

| SAQA US ID             | UNIT STANDARD TITLE         | UNIT STANDARD TITLE          |         |  |
|------------------------|-----------------------------|------------------------------|---------|--|
| 244520                 | Manage a hydrographic surve | Manage a hydrographic survey |         |  |
| ORIGINATOR             |                             | PROVIDER                     |         |  |
| SGB Maritime Defen     | ce                          |                              |         |  |
| FIELD                  | SUBFIELD                    |                              |         |  |
| 8 - Law, Military Scie | nce and Security            | Safety in Society            |         |  |
| ABET BAND              | UNIT STANDARD TYPE          | NQF LEVEL                    | CREDITS |  |
| Undefined              | Regular                     | Level 5                      | 6       |  |

#### **SPECIFIC OUTCOME** 1

Demonstrate an understanding of national and international legislation, regulations and policy in relation to the hydrographic survey.

#### **SPECIFIC OUTCOME 2**

Establish and communicate the scope and aim of the survey operation.

#### **SPECIFIC OUTCOME 3**

Direct the survey operations.

#### **SPECIFIC OUTCOME 4**

Evaluate operational effectiveness for a survey operation.



UNIT STANDARD:

#### Conduct military missions in accordance with national and naval doctrine

| SAQA US ID            | UNIT STANDARD TITLE            | UNIT STANDARD TITLE  |         |  |  |
|-----------------------|--------------------------------|--|---------|--|--|
| 244533                | Conduct military missions in a | Conduct military missions in accordance with national and naval doctrine |         |  |  |
| ORIGINATOR            |                                | PROVIDER   |         |  |  |
| SGB Maritime Defe     | nce                            |  |         |  |  |
| FIELD                 | SUBFIELD                       |  |         |  |  |
| 8 - Law, Military Sci | ence and Security              | Safety in Society  |         |  |  |
| ABET BAND             | UNIT STANDARD TYPE             | NQF LEVEL  | CREDITS |  |  |
| Undefined             | Regular                        | Level 6  | 8       |  |  |

#### **SPECIFIC OUTCOME 1**

Demonstrate an understanding of national and international legislation, regulations and policy in relation to a specified mission.

#### **SPECIFIC OUTCOME 2**

Establish the command aim and priority.

#### **SPECIFIC OUTCOME 3**

Direct operations at a tactical level.

#### **SPECIFIC OUTCOME 4**

Evaluate operational effectiveness for a specified mission.



#### **UNIT STANDARD:**

#### Plan voyage and conduct navigation

| SAQA US ID            | UNIT STANDARD TITLE                |                   |         |
|-----------------------|------------------------------------|-------------------|---------|
| 244531                | Plan voyage and conduct navigation |                   |         |
| ORIGINATOR            | PROVIDER                           |                   |         |
| SGB Maritime Defe     | nce                                |                   |         |
| FIELD                 | SUBFIELD                           |                   |         |
| 8 - Law, Military Sci | ence and Security                  | Safety in Society |         |
| ABET BAND             | UNIT STANDARD TYPE                 | NQF LEVEL         | CREDITS |
| Undefined             | Regular                            | Level 6           | 8       |

#### **SPECIFIC OUTCOME** 1

Maintain navigational charts, nautical publications and related documentation.

#### **SPECIFIC OUTCOME 2**

Plan route for voyage.

#### SPECIFIC OUTCOME 3

Fix vessel's position.

#### **SPECIFIC OUTCOME 4**

Document and report planned route.

#### **SPECIFIC OUTCOME 5**

Maintain and adjust vessel's course.



#### UNIT STANDARD:

#### Respond to navigational emergencies

| SAQA US ID             | UNIT STANDARD TITLE                    | UNIT STANDARD TITLE                 |         |  |
|------------------------|--|-------------------------------------|---------|--|
| 244527                 | Respond to navigational eme            | Respond to navigational emergencies |         |  |
| ORIGINATOR             | PROVIDER                               |                                     |         |  |
| SGB Maritime Defer     | nce                                    |                                     |         |  |
| FIELD                  | SUBFIELD                               |                                     |         |  |
| 8 - Law, Military Scie | 8 - Law, Military Science and Security |                                     |         |  |
| ABET BAND              | UNIT STANDARD TYPE                     | NQF LEVEL                           | CREDITS |  |
| Undefined              | Regular                                | Level 6                             | 10      |  |

#### SPECIFIC OUTCOME 1

Take action prior to and during a navigational emergency.

#### **SPECIFIC OUTCOME 2**

Perform damage control measures after a navigational emergency.

#### SPECIFIC OUTCOME 3

Manage the abandonment of the vessel.

#### **SPECIFIC OUTCOME 4**

Re-float a grounded vessel.

#### **SPECIFIC OUTCOME 5**

Coordinate emergency towing operations.



#### Control, conduct and respond to search and rescue operation

| SAQA US ID              | UNIT STANDARD TITLE          | UNIT STANDARD TITLE   |         |  |
|-------------------------|------------------------------|---|---------|--|
| 244522                  | Control, conduct and respond | Control, conduct and respond to search and rescue operation |         |  |
| ORIGINATOR              | PROVIDER                     |   |         |  |
| SGB Maritime Defend     | e                            |   |         |  |
| FIELD                   |                              | SUBFIELD  |         |  |
| 8 - Law, Military Scien | ice and Security             | Safety in Society   |         |  |
| ABET BAND               | UNIT STANDARD TYPE           | NQF LEVEL   | CREDITS |  |
| Undefined               | Regular                      | Level 6   | 8       |  |

#### **SPECIFIC OUTCOME 1**

Respond to a request for assistance.

#### **SPECIFIC OUTCOME 2**

Plan a coordinated search and rescue at sea.

#### **SPECIFIC OUTCOME 3**

Implement a coordinated rescue approach at sea.

#### **SPECIFIC OUTCOME 4**

Debrief a search and rescue operation.



#### UNIT STANDARD:

#### Organise and manage the crew

| SAQA US ID                             | UNIT STANDARD TITLE          |                   |         |
|--|------------------------------|-------------------|---------|
| 244510                                 | Organise and manage the crew |                   |         |
| ORIGINATOR                             |                              | PROVIDER          |         |
| SGB Maritime Defence                   |                              |                   |         |
| FIELD                                  |                              | SUBFIELD          |         |
| 8 - Law, Military Science and Security |                              | Safety in Society |         |
| ABET BAND                              | UNIT STANDARD TYPE           | NQF LEVEL         | CREDITS |
| Undefined                              | Regular                      | Level 6           | 8       |

#### **SPECIFIC OUTCOME 1**

Provide leadership to officers and crew.

#### **SPECIFIC OUTCOME 2**

Allocate duties.

#### SPECIFIC OUTCOME 3

Maintain standards of work and behaviour on board a vessel.

#### **SPECIFIC OUTCOME 4**

Resolve conflicts.

#### **SPECIFIC OUTCOME 5**

Plan, organise and promote shipboard training and assessment.

#### **SPECIFIC OUTCOME** 6

Evaluate shipboard training and assessment.



# Operate remote controls of propulsion plant and engineering systems and procedures

| SAQA US ID             | UNIT STANDARD TITLE   | UNIT STANDARD TITLE |         |  |
|------------------------|---|---------------------|---------|--|
| 244549                 | Operate remote controls of propulsion plant and engineering systems and<br>procedures |                     |         |  |
| ORIGINATOR             |   | PROVIDER            |         |  |
| SGB Maritime Defer     | nce   |                     |         |  |
| FIELD                  | SUBFIELD  |                     |         |  |
| 8 - Law, Military Scie | ence and Security   | Safety in Society   |         |  |
| ABET BAND              | UNIT STANDARD TYPE  | NQF LEVEL           | CREDITS |  |
| Undefined              | Regular   | Level 5             | 4       |  |

#### **SPECIFIC OUTCOME 1**

Operate remote controls of propulsion plant and engineering systems and services.

#### **SPECIFIC OUTCOME 2**

Coordinate deck and engine-room resources.

#### **SPECIFIC OUTCOME 3**

Manage emergency situations involving the use of remote controls.



#### **UNIT STANDARD:**

#### Control trim, stability and stress

| SAQA US ID            | UNIT STANDARD TITLE              |                                    |         |  |
|-----------------------|----------------------------------|------------------------------------|---------|--|
| 244546                | Control trim, stability and stre | Control trim, stability and stress |         |  |
| ORIGINATOR            |                                  | PROVIDER                           |         |  |
| SGB Maritime Defen    | nce                              |                                    |         |  |
| FIELD                 |                                  | SUBFIELD                           |         |  |
| 8 - Law, Military Sci | ence and Security                | Safety in Society                  |         |  |
| ABET BAND             | UNIT STANDARD TYPE               | NQF LEVEL                          | CREDITS |  |
| Undefined             | Regular                          | Level 5                            | 6       |  |

#### SPECIFIC OUTCOME 1

Monitor and maintain the structural integrity of the vessel.

#### **SPECIFIC OUTCOME 2**

Control the trim and stability of a vessel under normal operating conditions.

#### **SPECIFIC OUTCOME 3**

Control the trim and stability of a vessel in the event of damage and consequent flooding.

#### **SPECIFIC OUTCOME 4**

Manage the stress conditions of the vessel.



#### Conceive and direct the required state of operational readiness

| SAQA US ID             | UNIT STANDARD TITLE           |   |         |  |
|------------------------|-------------------------------|---|---------|--|
| 244540                 | Conceive and direct the requi | Conceive and direct the required state of operational readiness |         |  |
| ORIGINATOR             | PROVIDER                      |   |         |  |
| SGB Maritime Defen     | ce                            |   |         |  |
| FIELD                  | SUBFIELD                      |   |         |  |
| 8 - Law, Military Scie | nce and Security              | Safety in Society   |         |  |
| ABET BAND              | UNIT STANDARD TYPE            | NQF LEVEL   | CREDITS |  |
| Undefined              | Regular                       | Level 5   | 4       |  |

#### SPECIFIC OUTCOME 1

Determine a required state of readiness.

#### **SPECIFIC OUTCOME 2**

Oversee the conduct of acceptance trials.

#### SPECIFIC OUTCOME 3

Ensure that the vessel is maintained at the required state of operational readiness.

#### **SPECIFIC OUTCOME 4**

Evaluate the effectiveness of the process.



#### UNIT STANDARD:

#### Establish health and safety systems for vessel and crew

| SAQA US ID            | UNIT STANDARD TITLE            | UNIT STANDARD TITLE                                     |         |  |
|-----------------------|--------------------------------|---|---------|--|
| 244538                | Establish health and safety sy | Establish health and safety systems for vessel and crew |         |  |
| ORIGINATOR            |                                | PROVIDER  |         |  |
| SGB Maritime Defe     | nce                            |   |         |  |
| FIELD                 |                                | SUBFIELD  |         |  |
| 8 - Law, Military Sci | ence and Security              | Safety in Society                                       |         |  |
| ABET BAND             | UNIT STANDARD TYPE             | NQF LEVEL   | CREDITS |  |
| Undefined             | Regular                        | Level 5   | 6       |  |

#### **SPECIFIC OUTCOME 1**

Coordinate the monitoring of procedures for the safety of the work environment.

#### **SPECIFIC OUTCOME 2**

Coordinate the monitoring of health and safety of personnel on board ship.

#### **SPECIFIC OUTCOME 3**

Coordinate the monitoring of the operational condition of life saving, fire detection, fire fighting and other safety systems on board a vessel.

#### **SPECIFIC OUTCOME 4**

Coordinate the checking and replacement of consumable materials and items in life saving, fire detection, fire fighting and other safety systems.

#### **SPECIFIC OUTCOME 5**

Maintain documentation on the condition of life saving, fire detection, fire fighting and other safety systems on board.



#### **UNIT STANDARD:**

#### Forecast weather and oceanographic conditions

| SAQA US ID             | UNIT STANDARD TITLE         | UNIT STANDARD TITLE                           |    |  |
|------------------------|-----------------------------|---|----|--|
| 244536                 | Forecast weather and oceand | Forecast weather and oceanographic conditions |    |  |
| ORIGINATOR             |                             | PROVIDER                                      |    |  |
| SGB Maritime Defer     | nce                         |   |    |  |
| FIELD                  | SUBFIELD                    |   |    |  |
| 8 - Law, Military Scie | ence and Security           | Safety in Society                             |    |  |
| ABET BAND              | UNIT STANDARD TYPE          | NQF LEVEL CREDITS                             |    |  |
| Undefined              | Regular                     | Level 5                                       | 10 |  |

#### **SPECIFIC OUTCOME 1**

Collect and interpret weather and oceanographic data.

#### **SPECIFIC OUTCOME 2**

Forecast local weather and oceanographic conditions.

#### **SPECIFIC OUTCOME 3**

Maintain records of, and report, weather and oceanographic information and forecasts.



#### UNIT STANDARD:

#### Execute a peace support operation

| SAQA US ID             | UNIT STANDARD TITLE                    |                                   |         |  |
|------------------------|--|-----------------------------------|---------|--|
| 244548                 | Execute a peace support ope            | Execute a peace support operation |         |  |
| ORIGINATOR             | PROVIDER                               |                                   |         |  |
| SGB Maritime Defer     | nce                                    |                                   |         |  |
| FIELD                  | SUBFIELD                               |                                   |         |  |
| 8 - Law, Military Scie | 8 - Law, Military Science and Security |                                   |         |  |
| ABET BAND              | UNIT STANDARD TYPE                     | NQF LEVEL                         | CREDITS |  |
| Undefined              | Regular                                | Level 6                           | 6       |  |

#### **SPECIFIC OUTCOME 1**

Demonstrate an understanding of national and international legislation, regulations and policy in relation to a specified peace support mission.

#### **SPECIFIC OUTCOME 2**

Establish and communicate the mission scope and aim.

#### **SPECIFIC OUTCOME 3**

Direct peace support operations.

#### **SPECIFIC OUTCOME 4**

Evaluate operational effectiveness for a specified peace support mission.



Develop emergency and damage control plans and handle emergency situations

| SAQA US ID             | UNIT STANDARD TITLE  |                   |         |
|------------------------|--|-------------------|---------|
| 244547                 | Develop emergency and damage control plans and handle emergency situations |                   |         |
| ORIGINATOR             |  | PROVIDER          |         |
| SGB Maritime Defen     | се   |                   |         |
| FIELD                  | SUBFIELD   |                   |         |
| 8 - Law, Military Scie | nce and Security   | Safety in Society |         |
| ABET BAND              | UNIT STANDARD TYPE   | NQF LEVEL         | CREDITS |
| Undefined              | Regular  | Level 6           | 6       |

#### **SPECIFIC OUTCOME** 1

Prepare contingency plans for emergency response.

#### **SPECIFIC OUTCOME 2**

Develop plans for damage control following a shipboard emergency.

#### **SPECIFIC OUTCOME 3**

Develop plans for fire protection, detection and extinction.

#### **SPECIFIC OUTCOME 4**

Develop procedures for the use of various lifesaving appliances.

#### **SPECIFIC OUTCOME 5**

Coordinate the implementation of emergency response plans.



#### UNIT STANDARD:

#### Organise and manage the provision of medical care on board a vessel

| SAQA US ID            | UNIT STANDARD TITLE   | UNIT STANDARD TITLE |   |  |
|-----------------------|---|---------------------|---|--|
| 244545                | Organise and manage the provision of medical care on board a vessel |                     |   |  |
| ORIGINATOR            | PROVIDER  |                     |   |  |
| SGB Maritime Defe     | nce   |                     |   |  |
| FIELD                 | SUBFIELD  |                     |   |  |
| 8 - Law, Military Sci | ence and Security   | Safety in Society   |   |  |
| ABET BAND             | UNIT STANDARD TYPE  | NQF LEVEL CREDITS   |   |  |
| Undefined             | Regular   | Level 6             | 6 |  |

#### **SPECIFIC OUTCOME 1**

Take charge of a medical emergency on board a vessel.

#### **SPECIFIC OUTCOME 2**

Provide for routine medical care on board a vessel.

#### **SPECIFIC OUTCOME 3**

Seek assistance from shore-based medical advisers.

#### **SPECIFIC OUTCOME 4**

Perform quarantine procedures when entering port from overseas.

#### **SPECIFIC OUTCOME 5**

Oversee the maintenance of medical records.



#### UNIT STANDARD:

#### **Direct damage control activities**

| SAQA US ID                             | UNIT STANDARD TITLE              |                   |         |  |
|--|----------------------------------|-------------------|---------|--|
| 244544                                 | Direct damage control activities |                   |         |  |
| ORIGINATOR                             |                                  | PROVIDER          |         |  |
| SGB Maritime Defend                    | ;e                               |                   |         |  |
| FIELD                                  |                                  | SUBFIELD          |         |  |
| 8 - Law, Military Science and Security |                                  | Safety in Society |         |  |
| ABET BAND                              | UNIT STANDARD TYPE               | NQF LEVEL         | CREDITS |  |
| Undefined                              | Regular                          | Level 6           | 8       |  |

#### **SPECIFIC OUTCOME 1**

Prepare damage control plans for a combat vessel.

#### **SPECIFIC OUTCOME 2**

Direct and monitor damage control activities.

#### **SPECIFIC OUTCOME 3**

Evaluate the command aim.

#### SPECIFIC OUTCOME 4

Evaluate damage control techniques and activities.

#### **SPECIFIC OUTCOME 5**

Debrief drills, simulations or incidents.



#### UNIT STANDARD:

#### Manage vessel operations

| SAQA US ID                             | UNIT STANDARD TITLE      | UNIT STANDARD TITLE |         |  |
|--|--------------------------|---------------------|---------|--|
| 244542                                 | Manage vessel operations |                     |         |  |
| ORIGINATOR                             |                          | PROVIDER            |         |  |
| SGB Maritime Defer                     | nce                      |                     |         |  |
| FIELD                                  |                          | SUBFIELD            |         |  |
| 8 - Law, Military Science and Security |                          | Safety in Society   |         |  |
| ABET BAND                              | UNIT STANDARD TYPE       | NQF LEVEL           | CREDITS |  |
| Undefined                              | Regular                  | Level 6             | 10      |  |

#### **SPECIFIC OUTCOME 1**

Develop plans for general and specific vessel operations.

#### SPECIFIC OUTCOME 2

Ensure legal requirements are fulfilled.

#### **SPECIFIC OUTCOME 3**

Monitor and control vessel expenditure.

#### **SPECIFIC OUTCOME 4**

Develop and implement the vessel's ISM Code Safety Management System.

#### **SPECIFIC OUTCOME 5**

Monitor and control vessel's physical resources.

#### SPECIFIC OUTCOME 6

Analyse and compile voyage data.



#### Manoeuvre and handle the ship under all conditions

| SAQA US ID                             | UNIT STANDARD TITLE                                |                   |         |  |
|--|--|-------------------|---------|--|
| 244535                                 | Manoeuvre and handle the ship under all conditions |                   |         |  |
| ORIGINATOR                             |  | PROVIDER          |         |  |
| SGB Maritime Defend                    | ж<br>Ж   |                   |         |  |
| FIELD                                  |  | SUBFIELD          |         |  |
| 8 - Law, Military Science and Security |  | Safety in Society |         |  |
| ABET BAND                              | UNIT STANDARD TYPE                                 | NQF LEVEL         | CREDITS |  |
| Undefined                              | Regular  | Level 6           | 16      |  |

#### **SPECIFIC OUTCOME** 1

Manoeuvre the ship during mooring operations.

#### **SPECIFIC OUTCOME 2**

Manoeuvre the vessel for required operations in normal conditions.

#### **SPECIFIC OUTCOME 3**

Manoeuvre the ship during non-combat emergencies.

#### **SPECIFIC OUTCOME 4**

Manoeuvre the ship during helicopter operations.

#### **SPECIFIC OUTCOME 5**

Manoeuvre vessel during adverse weather conditions.