

Higher National Unit Specification

General information for centres

Unit title: Marine Emergency Response and Communication

Unit code: FOLK 34

Unit purpose: This Unit introduces candidates to the internationally recognised procedures to be followed in response to emergencies and distress signals at sea. It also considers the action to be taken when language difficulties are encountered at sea and the correct procedures to be followed when transmitting or receiving information by visual signalling using Morse code or flag signals as per the International Code of Signals. The Unit will also enable the candidate to transmit and receive Morse code and flag signals using equipment found on board all merchant vessels.

It is primarily aimed at candidates who intend to seek sea-going employment as a Merchant Navy Deck Officer. However it may also be studied by someone with an interest in the subject area.

On completion of this Unit the candidate should be able to:

- 1 Explain how to follow contingency plans in the event of emergencies.
- 2 Explain how to respond to distress signals.
- 3 Use procedures to communicate when language difficulties arise.
- 4 Transmit and receive information by visual signalling means.

Credit points and level: 1 HN Credit at SCQF level 7: (8 SCQF credit points at SCQF level 7*)

**SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to Doctorates.*

Recommended prior knowledge and skills: Access to this Unit is at the discretion of the centre. However candidates would benefit most from this Unit if they have successfully completed the *Marine Induction Course* associated with the HNC/D Nautical Science.

Core Skills: There are opportunities to develop the following Core Skills in this Unit, although there is no automatic certification of Core Skills or Core Skills components.

Communication: Written at SCQF level 5

Communication: Oral at SCQF level 6

Communication: Reading at SCQF level 5

Using Information Technology at SCQF level 5

Problem Solving: Critical Thinking at SCQF level 6

Problem Solving: Planning and Organising at SCQF level 6

Problem Solving: Reviewing and Evaluating at SCQF level 6

Working with Others at SCQF level 6

General information for centres (cont)

Context for delivery: If this Unit is delivered as part of a Group Award, it is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes.

Assessment: Assessment may be carried out on a sample basis with Outcomes 1 and 2 being assessed by means of a closed-book assessment under supervised conditions. Both Outcomes may be assessed in a combined assessment.

Outcome 3 may be assessed by means of an open-book assessment under supervised conditions consisting of short answer questions. Outcome 4 may be assessed by a practical assessment where the candidate demonstrates that they can send Morse, using a standard Morse key, and read Morse code sent by visual means. Outcomes 3 and 4 may be combined for assessment purposes.

Higher National Unit specification: statement of standards

Unit title: Marine Emergency Response and Communication

Unit code: FOLK 34

The sections of the Unit stating the Outcomes, knowledge and/or skills, and Evidence Requirements are mandatory.

Where evidence for Outcomes is assessed on a sample basis, the whole of the content listed in the knowledge and/or skills section must be taught and available for assessment. Candidates should not know in advance the items on which they will be assessed and different items should be sampled on each assessment occasion.

Outcome 1

Explain how to follow contingency plans in the event of emergencies

Knowledge and/or skills

- ◆ Requirement to call the Master to the bridge
- ◆ Failure of bridge and engine room equipment.
- ◆ Emergency situations at sea

Evidence Requirements

Candidates will need to provide evidence to demonstrate their knowledge and/or skills by showing that they can:

- 1 Describe the circumstances when the Master must be called to the bridge.
- 2 Explain the emergency action to be taken by the Officer of the Watch (OOW) from a sample of three of the following shipboard emergency situations:
 - (a) Failure of critical navigational aid equipment on the bridge.
 - (b) Failures of bridge control equipment.
 - (c) Failure of the vessel's navigation lights.
 - (d) Failure of the vessel's autopilot and steering systems.
 - (e) Failure of the vessel's propulsion systems.
 - (f) Failure of the vessel's alarm systems.
- 3 Explain the emergency action to be taken by the OOW from a sample of three of the following emergency situations:
 - (a) Man overboard.
 - (b) Fire.
 - (c) Collision.
 - (d) Stranding or grounding.
 - (e) Flooding and stability emergencies.
 - (f) Cargo/passenger emergencies.
 - (g) Emergencies in port or at anchor.
 - (h) Piracy.
 - (i) Abandon ship.

Higher National Unit specification: statement of standards (cont)

Unit title: Marine Emergency Response and Communication

- (j) Incidents harmful to the marine environment.

On each assessment occasion, in the case of 2 and 3 above, candidates should cover the following points:

- ◆ the immediate action to be taken
- ◆ the subsequent action to be taken
- ◆ any communications which may be required and any signals which must be exhibited
- ◆ procedures to be followed to ensure the safety of the crew, vessel and environment

Where sampling is used a different sample must be used on each assessment occasion.

Assessment guidelines

Outcome 1 may be assessed by means of a closed-book assessment under supervised conditions consisting of short answer questions.

Outcome 2

Explain how to respond to distress signals

Knowledge and/or skills

- ◆ Global Maritime Distress and Safety System (GMDSS)
- ◆ Distress, Urgency and Safety Signals
- ◆ Action to be taken in response to a distress signal
- ◆ Search and rescue (SAR) operations in UK waters and Ocean areas

Evidence Requirements

Candidates will need to provide evidence to demonstrate their knowledge and/or skills by showing that they can:

- 1 Explain the format, content, use and means of transmission for a sample of one of the following:
 - (a) Distress message.
 - (b) Urgency message.
 - (c) Safety message.

On each assessment occasion the candidate's explanations should conform to that found in the following publications:

International Aeronautical and Maritime Search and Rescue Manual (IAMSAR)
Convention on the Safety of Life at Sea (SOLAS)
International Regulations for the Prevention of Collisions at Sea (IRPCS)
Annual Summary of Notices to Mariners Notice to No 4 (ASNMM)

Higher National Unit specification: statement of standards (cont)

Unit title: Marine Emergency Response and Communication

- 2 Explain the actions to be followed on receipt of a distress message from either a vessel in distress or an aircraft in distress.
- 3 Explain the Search and Rescue (SAR) procedures to be followed when rendering assistance to either a vessel in distress or an aircraft in distress.

In 3 above candidates should include procedures for determining the position of the casualty, preparations to be made on board own vessel, action to be taken when own vessel arrives on scene, typical search patterns, action to be taken to conclude SAR operations.

- 1 Describe the provisions of a sample of one of the following:
 - ◆ Global Maritime Distress and Safety System
 - ◆ Organisation of Search and Rescue Operations in UK waters
 - ◆ Ship Reporting Systems and organisation of Search and Rescue Operations in Ocean regions

Where sampling is used a different sample should be used on each assessment occasion.

Assessment guidelines

Outcome 2 may be assessed by means of a closed-book assessment under supervised conditions consisting of short answer questions. Outcomes 1 and 2 may be combined for assessment purposes.

Outcome 3

Use procedures to communicate when language difficulties arise

- ◆ KN IMO Standard Marine Communication Phrases
- ◆ International Code of Signals
- ◆ Radio Distress Communication procedures

Evidence Requirements

Candidates will need to provide evidence to demonstrate their knowledge and/or skills by showing that they can:

- 1 Use the Standard Marine Communication Phrases to communicate with others where there are language difficulties.
- 2 Follow recognised procedures for coding and decoding flag messages using the International Code of signals.
- 3 Describe the correct procedure for communicating via radio during search and rescue operations.

Assessment guidelines

Outcome 3 may be assessed by a practical demonstration with candidate sending and receiving.

Higher National Unit specification: statement of standards (cont)

Unit title: Marine Emergency Response and Communication

Outcome 4

Transmit and receive information by visual signalling means

Knowledge an/or skills

- ◆ Send and receive signals using Morse code by means of flashing light
- ◆ Send and transmit signal using the International Code of Signals

Evidence requirements

Candidates will need to provide evidence to demonstrate their knowledge and/or skills by showing that they can:

- 1 Receive Morse code by light at a rate of 20 letters/numbers in two minutes.
- 2 Transmit letters and numerals by Morse code using light.
- 3 Send and receive Morse code following procedures as per the International Code of Signals (ICS).
- 4 Recognise single flag codes as per the International Code of Signals.
- 5 Transmit and receive flag messages using the International Code of Signals.

Assessment guidelines

Elements 1, 2 and 3 of Outcome 4 may be assessed by means of closed-book assessment under supervised conditions where the candidate will be required to read and send Morse at a rate of 20 letters per minute and explain the procedures for sending messages by Morse code as detailed in the International Code of Signals.

Elements 4 and 5 of Outcome 4 may be assessed by means of an open-book assessment under supervised conditions, where the candidate will be required to code, decode and interpret signal flags using the International Code of Signals. Candidates should have access to the ICS when being assessed for Element 5 above only.

Administrative Information

Unit code: F0LK 34

Unit title: Marine Emergency Response and Communication

Superclass category: ZF

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Version	Description of change	Date

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Higher National Unit specification: support notes

Unit title: Marine Emergency Response and Communication

This part of the Unit specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

Guidance on the content and context for this Unit

This Unit forms part of the underpinning knowledge requirements for a Certificate of Competence in the Merchant Navy as Officer of the Watch Unlimited (STCW '95 II/1), and reflects the content of the International Maritime Organisations' Standards of Training, Certification and Watchkeeping (STCW95) requirements for that role.

Guidance on the delivery and assessment of this Unit

The Unit introduces candidates to the procedures to be followed by the Officer of the Watch (OOW) when emergencies arise at sea. Extensive reference will be made to the contents of International Code of Signals and also the Bridge Procedures Guide. The contents of relevant Merchant Shipping Notices and Marine Guidance Notes will be explored and their application to various types of emergencies, that may occur on board ship, considered.

Candidates who successfully achieve this Unit will also be eligible for the award of their Maritime and Coastguard Agency (MCA) Signals Certificate. This Unit will also contribute towards the award of the STCW 95 GMDSS Certificate.

Outcome 1

This introduces the candidate to the role of the OOW and the Master in case of emergencies and the action that should be taken when various types of emergency occur. The candidate will learn what initial action should be taken and what subsequent action may be required to ensure the safety of the vessel, the cargo, crew and marine environment.

Details of the accepted procedures to be followed in each type of emergency will be discussed and the communication required both internally on the ship and externally with relevant authorities explained.

Outcome 2

This Outcome introduces the candidate to the internationally recognised procedures to be followed on receipt of Distress, Urgency and Safety signals. The concept GMDSS will be examined and the regulations pertaining to transmission and receiving of the above signals will be explained in detail. The contents of the IAMSAR manual, Annual Summary of Notices to Mariners and relevant Merchant Shipping Notices will be examined in depth.

Higher National Unit specification: support notes (cont)

Unit title: Marine Emergency Response and Communication

Outcome 3

This Outcome introduces candidates to the International Code of Signals and the IMO Standard Marine Vocabulary. Candidates will have to use each of the former publications to send and receive information when communicating with other seafarers or shore establishments, where there are problems in understanding the English language.

Outcome 4

This Outcome covers the use of Morse code and flag signals to transmit and receive information. It also introduces the phonetic alphabet, which is internationally recognised.

Candidates will be required to send and receive Morse using light and explain the procedures to be followed when signalling by Morse.

Single flag hoists will be examined and candidates will be expected to interpret any single flag signal. Multiple flag hoists will be explained and candidates should be able to code and decode multiple flag hoists with the assistance of the International Code of Signals.

Opportunities for developing Core Skills

The Unit provides candidates with the opportunity to develop the Core Skill of Communication: Writing, Reading at SCQF level 5. Candidates will develop the use of both by having to read and understand complex legislation found in Statutory Instruments and detailed procedures found in manuals which are published by the IMO and will have to present this in plain English in written assessment. The Core Skill of Communication: Oral at SCQF level 6 can be developed through the candidate having to explain the complex procedures regarding internationally agreed practices in sending and receiving distress, urgency and safety signals. It is vital that these are presented in clear precise terms that can be understood when received by radio or by other signalling means.

Candidates can develop the Core Skill of Using Information Technology at SCQF level 5 by having to set up and use highly technical radio and satellite communications equipment.

The Core Skill of Problem Solving in all three disciplines can be developed by getting candidates to critically evaluate the impact of various shipboard emergencies and develop strategies and contingency plans to deal with these. Candidates will be given case studies to discuss and will be asked to review the actions taken and evaluate their effectiveness. In particular the importance of the latter at the conclusion of shipboard emergency drills will be discussed at length.

The Core Skill of Working With Others can be developed by candidates working in small groups when using and demonstrating their understanding of modern communications equipment.

Higher National Unit specification: support notes (cont)

Unit title: Marine Emergency Response and Communication

Open learning

This Unit is not suited to delivery by distance learning because it requires candidates to be observed and questioned by a qualified practitioner to meet Statutory/professional body requirements

Candidates with disabilities and/or additional support needs

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments or considering alternative Outcomes for Units. For information on these, please refer to the SQA document *Guidance on Alternative Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs*, which is available on SQA's website: www.sqa.org.uk.

General information for candidates

Unit title: Marine Emergency Response and Communication

This Unit is designed to introduce you to the practices and procedures to be followed when emergencies arise at sea. You will be required to explain your initial and subsequent actions when such emergencies are encountered. The role of the OOW and the Master and their interaction during emergency situations will be covered in some detail.

The Unit also covers the Global Maritime Distress and Safety System and the responsibility of the Officer of the Watch when the vessel receives distress messages or is involved in Search and Rescue Operations. The contents of the IAMSAR manual will be explained and the practical use of this publication in the above situations discussed.

The use of Morse code and other signalling means will be demonstrated and you will be required to send and receive messages by Morse code and flag signalling. The contents of the International Code of Signals will be examined. Successful completion of this Unit will result in the award of an MCA Signals Certificate. This Unit also contributes towards the award of your GMDSS Certificate.