



Higher National Unit specification: general information

Unit title: Marine Engineering: Marine Management

Unit code: H0EJ 35

Superclass: XQ

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Unit purpose

This Unit introduces candidates to the various aspects of the management of shipboard operations, personnel and resources. It examines the sources/structure of marine legislation, management practices necessary to monitor and control compliance with the legislation and additional management skills required for work in the multicultural marine environment.

It is primarily aimed at candidates who intend to seek sea-going employment as a Merchant Navy Engineering Officer and will meet MCA requirements up to Class 1 certificate of competency. 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 Interpret and apply marine legislation and safety management systems to shipboard operations.
- 2 Analyse personnel management theory as it applies to the roles of Senior Officers onboard ship.
- 3 Apply management theory and methods of system control in a shipboard context.

Recommended prior knowledge and skills

Entry to this Unit is at the discretion of the centre, however candidates would benefit most from this Unit if they have acquired some sea time onboard a ship.

General information (cont)

Credit points and level

2 Higher National Unit credits at SCQF level 8: (16 SCQF credit points at SCQF level 8*)

**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.*

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.

There may be opportunities to gather evidence towards the following Core Skills in this Unit;

Communication: Oral at SCQF level 6

Communication: Reading at SCQF level 6

Communication: Written at SCQF level 6

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

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.

Higher National Unit specification: statement of standards

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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

Interpret and apply marine legislation and safety management systems to shipboard operations.

Knowledge and/or Skills

- ◆ International Regulations and regulatory bodies.
- ◆ Application of regulations by flag states.
- ◆ The Code of Safe Working Practices (COSWP)
- ◆ The role of the Safety Officer.
- ◆ Roles Certification and certification bodies.
- ◆ Survey and inspections processes.
- ◆ Dealing with non-compliance.

Evidence Requirements

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

- ◆ Discuss the IMO history, members, structure, the structure and layout of S.O.L.A.S., MARPOL and STCW95, interpreting main conventions and codes
- ◆ Discuss the role of flag states and interpret the UK flag implementation of IMO conventions with Statutory Instruments, M Notices, statutory certificates, Port state Inspections and the MCA certificate structure
- ◆ Explain the structure of COSWP, itemising the most important guidance
- ◆ Analyse the role of the safety officer
- ◆ Discuss the role of classification societies, certification systems, (continuous surveys, approved systems) Harmonisation of surveys, Class certificates
- ◆ Describe the survey process and explain the preparation required for surveys. (statutory, Class, port state, charterer's and company)
- ◆ Discuss the organisational procedures for dealing with regulation non-compliance, analysing the effects on the ship, company or organisation of non-compliance; personal and corporate penalties for non-compliance

Higher National Unit specification: statement of standards (cont)

Unit title: Marine Engineering: Marine Management

Outcome 2

Analyse personnel management theory as it applies to the roles of Senior Officers onboard ship.

Knowledge and/or Skills

- ◆ Shipboard management structure.
- ◆ The responsibilities of individuals within the management structure.
- ◆ Analyse efficiency by means of performance indicators.
- ◆ Employment law applied to the marine industry.
- ◆ Interpret the Code of Conduct.
- ◆ Analyse the need for performance appraisals.
- ◆ The role of Trades unions.
- ◆ Personnel management theory.
- ◆ Culture factors within multi-national crews.
- ◆ The cause and prevention of personnel problems.
- ◆ The principles of counselling.

Evidence Requirements

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

- ◆ Analyse a typical company management structure, its aims, objectives, and the formulation and implementation of strategy and policy
- ◆ Describe the Senior Officers main responsibilities and duties (Master, CEO, 1st Mate and 2nd Engineer)
- ◆ Analyse performance indicators and measures of efficiency/effectiveness of a ships management system — onboard and ashore
- ◆ Analyse the basic principles of employment law, and describe the principles and application of disciplinary and grievance procedures
- ◆ Describe the purpose of the Code of Conduct, interpreting its content and application
- ◆ Analyse the need for performance appraisals by describing own example or a case study
- ◆ Describe the role and function of trade unions
- ◆ Analyse how to identify, handle and prevent racial discrimination, sexual discrimination harassment and bullying
- ◆ Analyse the effects of and describe how to deal with cultural factors affecting multi-national crew
- ◆ Analyse the causes and effects of fatigue, stress, drink/drugs problems and describe the manager's role in prevention
- ◆ Describe basic counselling principles and methods

Higher National Unit specification: statement of standards (cont)

Unit title: Marine Engineering: Marine Management

Outcome 3

Analyse management theory and methods of system control in a shipboard context.

Knowledge and/or Skills

- ◆ Quality assurance.
- ◆ The application of the International Safety Management (ISM) code.
- ◆ The purpose and practice of auditing.
- ◆ The importance of accurate record keeping.
- ◆ Communication methods.
- ◆ Prepare a written report.

Evidence Requirements

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

- ◆ Analyse quality assurance and apply to shipboard activity
- ◆ Investigate the ISM Code, describing reasons for its implementation, basic content and application
- ◆ Analyse the purpose, and practice of internal and external auditing
- ◆ Analyse the importance of accurate records for operational, commercial and legislative requirements, dispute resolution; in cases of emergencies, and confidentiality
- ◆ Explain basic onboard communication methods
- ◆ Prepare a written technical report for an investigating body

Higher National Unit specification: support notes

Unit title: Marine Engineering: Marine Management

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 80 hours.

Guidance on the content and context for this Unit

The content of this Unit forms part of the underpinning knowledge for the Level 3 SVQ *Marine Vessel Operations* and reflects the content of the International Maritime Organisation's *Standards of Training Certification and Watchkeeping (STCW)*.

Guidance on the delivery of this Unit

This Unit is designed to introduce candidates to the main concepts of the management of personnel, operations and safety on board ship.

This Unit forms part of the underpinning knowledge requirements for a Certificate of Competency in the Merchant Navy as Chief Engineer Unlimited (STCW '95 III/2), and reflects the content of the International Maritime Organisations' (STCW '95) requirements for that role.

Candidates will be introduced to the various theories relating to the management of personnel and operations as applicable under current UK and International legislation.

Outcome 1

This Outcome introduces the maritime organisations necessary for safer ships and cleaner oceans, the through life cycle of surveying and certification. It examines the interpretation and application of current international and UK legislation.

Outcome 2

This Outcome introduces the senior officer's responsibilities for interaction with other crew members, and explores the importance of leadership, support, guidance and counselling. The management of shipboard discipline, discrimination, appraisal, fatigue and the current legislation regarding this will be developed by means of case studies.

Higher National Unit specification: support notes (cont)

Unit title: Marine Engineering: Marine Management

Outcome 3

This Outcome deals with the implementation of the International Safety Management code and its impact on the management of safety on board the ship. It describes the implementation of auditing for quality assurance purposes and emphasises the need for accurate record keeping and good communication.

The need to develop a safety culture and implement risk assessment procedures will be explained and the roles and responsibilities of the vessel's Safety Committee and Safety Officials discussed.

The need for audits and procedures for investigating and reporting accidents will be considered and the related documentation and records discussed.

Guidance on the assessment of this Unit

The assessment of the Unit requires that all Knowledge and/or Skills are evidenced.

It is recommended that Outcome 1 is assessed by means of an open-book test. Outcome 2 is assessed by means of an assignment/ship board case study. Outcome 3 is assessed by means of an investigation assignment.

Assessment Guidelines

Outcome 1

Outcome 1 may be assessed by means of an open-book assessment that includes evidence of all Knowledge and/or Skills above.

Outcome 2

Outcome 2 may be assessed by means of assignment or a case study prepared by the candidate whilst training onboard a ship. Candidates could be given a choice of three subject matters based on the Evidence Requirements.

Outcome 3

Outcome 3 may be assessed by means of an investigation assignment that generates evidence of all Knowledge and/or Skills above.

Online and Distance 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.

Higher National Unit specification: support notes (cont)

Unit title: Marine Engineering: Marine Management

Opportunities for developing Core Skills

There are opportunities to develop the following Core Skills at SCQF level 6.

Communication: Oral can be developed within the context of group work and role play where candidates will be encouraged to express opinions and present rational arguments for and against a position.

Communication: Reading will be developed by candidates having to comprehend complex legislation regarding management of shipboard operations and safety procedures.

Communication: Written can be developed within the assessment regime as candidates will have to produce a well written assignment/case study in which they clearly present information.

Problem Solving: Critical Thinking can be developed by having candidates analyse conflict situations that may arise in the workplace and then evaluate the necessary approaches required to resolve the situation.

Problem Solving: Planning and Organising can be developed by allowing candidates to plan and organise their own time and research requirements for completing the assignment.

Problem Solving: Reviewing and Evaluating may be developed when candidates consider safety management systems on board ships. This requires seafarers to evaluate the effectiveness of the system when accidents or dangerous incidents occur and they will then review existing procedures and amend them accordingly.

Working with Others can be developed during group work and role playing.

Disabled candidates and/or those with additional support needs

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering whether any reasonable adjustments may be required. Further advice can be found on our website www.sqa.org.uk/assessmentarrangements

History of changes to Unit

Version	Description of change	Date

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General information for candidates

Unit title: Marine Engineering: Marine Management

This Unit is designed to introduce you to the theory and principles of typical management scenarios found onboard ships.

You will learn about the reasoning, history and application of the main international regulatory bodies and the conventions/regulations/codes they administer.

You will learn about UK regulations/codes of practice, and how these are disseminated to shipboard staff.

You will learn about ship classification, survey/auditing and the effect on the ship if found non-compliant.

You will learn about the management of multicultural personnel and the different styles of management that you may come across. The role of the Senior Officer as a manager will be discussed in detail, with particular emphasis on the appraisal, disciplinary, guidance and counselling aspects of his role.

The requirements of the International Safety Management (ISM) Code and the impact of quality assurance on the ship's operations will be considered.

You will have opportunities to develop your Core Skills *in Communication, Problem Solving* and *Working with Others* at SCQF level 6 in the teaching and assessment approaches used in this Unit.

The assessment of the Unit requires that all Knowledge and/or Skills are evidenced.

You may be assessed in the following way:

- ◆ Outcome 1 may be assessed by means of an open-book test
- ◆ Outcome 2 may be assessed by means of an assignment/ship board case study
- ◆ Outcome 3 may be assessed by means of an investigation assignment