



MCAST

Malta College of Arts, Science & Technology

MQF Level 3

MI3-01-20

Diploma in Deck Operations

Course Specification

Course Description

This study programme is mainly intended for students who in future intend to apply for the course leading to an Officer in Charge of a Navigational Watch, but who as yet do not possess all the academic entry requirements to commence the OIC Navigational Watch certificate. It also caters for students who would like to actively work in a maritime environment as deck crew and gain valuable sea time.

The Diploma in Deck Operations will deliver a solid foundation in general ship knowledge, seamanship, navigation and understanding the basic legislative environment that vessels operate in. In addition, this course gives students the opportunity to complete the full STCW basic course components and be eligible to sit for the Commercial Vessel Boatmaster grade 1 exam and the GMDSS ROC certificate. Students will also be exposed to a deeper knowledge in key subjects namely: Mathematics, Science, English, Maltese and Information Technology.

Programme Learning Outcomes

At the end of the programme the students are able to:

- 1. Perform various basic tasks related to boat handling and maintenance.*
- 2. Identify and describe different types of vessels, construction processes, structure of a ship and related laws and regulations.*
- 3. Identify and interpret flag signals, the phonetic alphabet, flashing light signals and various basic meteorological processes.*
- 4. Carry out basic fire prevention, firefighting and elementary first.*

Entry Requirements

- 4 SEC/O-Level passes/SSC&P (Level 3) passes
Compulsory: English Language
A full “Secondary School Certificate and Profile” (SSC&P) at Level 2 will be accepted in lieu of one (1) O-Level pass.

Other Entry Requirements

Medical Test, Physical Aptitude Test and Interview

Current Approved Programme Structure

| Unit Title | ECVET/ECTS |
|---|-------------------|
| Introduction to General Ship Knowledge | 3 |
| Legislation, Code of Safe Practices and Local Regulations | 3 |
| Ship's Physics and Engineering | 3 |
| Navigation | 6 |
| Meteorology and Collision Regulations | 6 |
| Introduction to Stability | 3 |
| Seamanship & Boat work | 6 |
| STCW Basic Training | 3 |
| GMDSS ROC | 3 |
| Mathematics | 4 |
| Science | 4 |
| English | 4 |
| Malti | 4 |
| Information Technology | 4 |
| Individual and Social Responsibility | 4 |
| Total ECVET/ECTS | 60 |

Introduction to General Ship Knowledge

Unit level (MQF): 3

Credits: 3

Unit Description

In this unit students will learn the terminology used in describing vessels and also gain a good understanding of the different types of vessels and their features. Students will also have the opportunity to explore the impact the environment can have on a vessel's integrity.

Learning Outcomes

Upon completion of this unit the learner will be able to:

1. *Define the ship's dimensions and form.*
2. *Identify the important features of a ship's structure.*
3. *Identify main features of a range of ship types.*

Legislation, Code of Safe Practices and Local Regulations

Unit level (MQF): 3

Credits: 3

Unit Description

This unit introduces students to applicable conventions in international maritime law, as well as their implementation into domestic legislation. Students will have the opportunity to familiarise with the law of the sea, safety legislation, the law governing the marine environment, seafarers' rights, and a variety of rules that affect shipping, including salvage, towage and pilotage and the carriage of goods.

Learning Outcomes

Upon completion of this unit the learner will be able to:

1. *Understand basic generic principles on the general nature of maritime law.*
2. *Evaluate different legislation regarding safety and the marine environment.*
3. *Understand the basic principles governing the use of the sea in different zones and the implementation of customary international law into conventions in different areas.*
4. *Understand the rights of seafarers, and the obligations of ship owners, managers and operators, when accepting employment on-board ship.*

Ship's Physics and Engineering

Unit level (MQF): 3

Credits: 3

Unit Description

In this unit students will contextualise elements of physics that are fundamental forces in the maritime world and which are not part of the Science Key Skills syllabus. These elements include Magnetism, Electromagnetism, Waves and Optics. Students will also have the opportunity to familiarise with the engineering systems which are crucial on a vessel, such as: power generation, engines, HVACR systems, sewage and water supply systems.

Learning Outcomes

Upon completion of this unit the learner will be able to:

1. *Understand the basics of Magnetism and Electromagnetism.*
2. *Understand the basics of Waves and Optics.*
3. *Understand the different types of marine power system and auxiliaries.*
4. *Understand the basic function of the on-board hotel services.*

Navigation

Unit level (MQF): 3

Credits: 6

Unit Description

In this unit students will be introduced to different types of navigational systems. They will learn about the description of their main features and about the importance of continuous orientation of the ship on the selected sailing route. Students will have the opportunity to learn about the fundamentals of steering and steering systems. They will also learn about navigational tools which should be applied in a specific situation. They will learn the fundamentals of charts and other navigational tools and how to use them to determine the precise position of the ship with responsibility and autonomy.

Learning Outcomes

Upon completion of this unit the learner will be able to:

- 1. Apply different types of navigational systems in specific situations.*
- 2. Know the fundamentals of charts and other navigational tools.*
- 3. Conduct safe navigational watch.*
- 4. Apply the fundamentals of steering and steering systems (practical in simulator).*

Meteorology and Collision Regulations

Unit level (MQF): 3

Credits: 6

Unit Description

In this Unit students will have the opportunity to familiarise with terminology, symbols and charts commonly used in meteorology and understand factors that affect weather conditions. Students will also familiarise themselves with the Marine Safety Act by learning to identify the different vessel navigation lights which must be displayed in case of restricted visibility, day shapes for vessels and distress signals. Students will also learn about the conduct of vessels in restricted visibility in order to avoid collision between vessels.

Learning Outcomes

Upon completion of this unit the learner will be able to:

1. *Be familiar with meteorology terminologies and weather charts.*
2. *Understand the steering and sailing rules.*
3. *Identify the lights and shapes.*
4. *Identify sound, light and distress signals.*

Introduction to Stability

Unit level (MQF): 3

Credits: 3

Unit Description

This unit will expose students to the basic principles of ship's sea worthiness, covering and developing a basic understanding of buoyancy and the importance of stability. Students will be introduced to ship's hydrostatic data and gain basic knowledge related to transverse statical stability, list and trim. Through this unit students will also learn about the importance of assignment of freeboard to the ship, carry out basic calculations related to it and sketch Load Line markings.

Learning Outcomes

Upon completion of this unit the learner will be able to:

1. *Understand the basic principles of the ship floatation.*
2. *Identify and understand the ship's hydrostatic data.*
3. *Understand the basic knowledge of the transverse statical stability, list and trim.*
4. *Understand the importance of assigning the freeboard to the ship.*

Seamanship & Boat Work

Unit level (MQF): 3

Credits: 6

Unit Description

This Unit delivers the knowledge and skills required to be a competent member of crew and also basic competency in handling boats and small craft up to 25 metres.

Students will have the opportunity to learn how to perform different knots and splices commonly used in a nautical environment. They will also learn the elements of watch keeping and how to structure a navigational watch.

Learning Outcomes

Upon completion of this unit the learner will be able to:

- 1. Understand nautical language and safety awareness in a marine environment.*
- 2. Handle a small boat in different conditions.*
- 3. Demonstrate different types of cordage and apply appropriate knots and splices according to circumstance.*
- 4. Understand the duties of a watch-keeper in maintaining a safe navigational watch at all times.*

STCW Basic Training

Unit level (MQF): 3

Credits: 3

Unit Description

This unit provides students with the basic competences required by the standards of training certification and watch keeping for seafarers which includes basic firefighting, elementary first aid, personal survival techniques and personal safety and social responsibility. This training will ensure that students are aware of the hazards of working on a vessel and can respond appropriately.

Learning Outcomes

Upon completion of this unit the learner will be able to:

1. *Take immediate action upon encountering an accident or other medical emergency.*
2. *Minimise the risk of fire and maintain a state of readiness to respond to emergency situations involving fire.*
3. *Survive at sea in the event of ship abandonment.*

GMDSS ROC

Unit level (MQF): 3

Credits: 3

Unit Description

This unit enables students to operate GMDSS equipment under the International Maritime Organisation SOLAS convention. It provides them with the competence, knowledge and practical skills to operate radio equipment on board a vessel.

Learning Outcomes

Upon completion of this unit the learner will be able to:

1. *Demonstrate knowledge of the regulatory environment.*
2. *Understand GMDSS sub-systems and equipment.*
3. *Understand VHF radiotelephony procedures in the maritime mobile service.*