



**PORTS and MARITIME AFFAIRS**

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**Directive No. STCW/11**  
**CADET TRAINING PROGRAMME**

Issued under the enabling power of the Ministerial Resolution 6/2001  
and including STCW 2010 Manila Amendments

In order to be eligible to undertake training and assessment leading to an appropriate certificate under regulation II/1 or III/1, it will be necessary to meet the following requirements:

**1. Deck Cadet:**

Candidates should be under 25 years of age at the commencement of training; be medically fit; and hold a GCSE at a Grade not lower than 'C' in English, Mathematics and Science/Physics or equivalent. They will be required to undergo an initial training of 3 months in an approved institute that will also include Basic Training (Code A-VI/1).

They will then have to complete a minimum period of 12 months sea-service (of which at least 6 months must be spent on Navigational Watch-keeping duties under the supervision of certificated officers) as a Deck Cadet during which time the IMO, UK-MNTB, ISF, or equivalent Training Record Book shall be maintained.

The final phase of training shall comprise a period of about 6 months in an approved institute when the Cadet will undertake short ancillary training required under STCW regulation VI and successfully complete the required education, training and assessment under STCW regulation II/1 before a Certificate of Competency may be issued for the capacity of Officer in Charge of a Navigational Watch.

**2. Deck Ratings:**

Deck Rating may also undertake education, training and assessment for an appropriate certificate under STCW II/1 after completing 3 years' service in the deck department (of which at least 6 months of the last 12 months must be spent on Navigational Watch-keeping duties on the Bridge under the supervision of a certificated deck officer). The rating shall also be required to following the training courses and maintain a Training Record Book, as specified above.

**3. Engineer Cadet:**

Candidates should be under 25 years of age at the commencement of training; be medically fit; and hold a GCSE at a Grade not lower than 'C' in English, Mathematics and Science/Physics or equivalent. They will be required to undertake an approved initial workshop training of 24 months followed by Basic Training as required under STCW A-VI/1. If a Candidate holds 'A' levels in Physics and Mathematics or a Diploma in Engineering then the period of shore-based Workshop training may be reduced by 6 months, and in the case of a Degree in Engineering by 12 months.

The second phase of training will be shipboard training (sea-service) for a minimum period of 12 months of which at least 6 months as a Cadet Engineer or Assistant Engineer under the supervision of a certificated engineer officer, during which time the IMO, UK-MNTB/ ISF, or equivalent Training Record Book shall be maintained.

The third and final phase of training shall comprise of a period of about 6 months in an approved institute where the candidate will undertake short ancillary training required under STCW regulation VI and successfully complete the required education, training and assessment under regulation III/1 before a Certificate of Competency may be issued for the capacity of Officer in charge of



an Engineering Watch in a manned engine-room or designated duty engineer in a periodically unmanned engine-room.

**4. Revision history:**

Revision No. 2 of the present Directive supersedes the Directive Number 12, which was published by the President of Customs and Ports on 24th October 2001.

**Hassan Ali Al Majed**

Undersecretary for Ports and Maritime Affairs

16<sup>th</sup> August 2016



ANNEX – 1

**Appropriate Certificate (Certificate of Competency) as Officer in charge of a Navigational Watch (Navigational Watch-keeping Officer) under regulation II/1 of STCW95.**



**Oral Examination (not mandatory in the Convention): For STCW Reg. II/1 Cert.**



**College course (about 6 months):** To successfully complete the STCW syllabus A-II/1 (may be part of HND or degree) relating to Navigational Watch-keeping Officer. The course will also include short Ancillary courses on:

1. CPSC&RB
2. Advanced Fire-fighting
3. Medical First-Aid
4. GMDSS (GOC)
5. ENS & ECDIS/ Radar-ARPA/ Bridge Team-work



**Sea-service:** At least 12 months as Deck Cadet of which last 6 months on Navigational Bridge associated with Watch-keeping duties under supervision of a certificated Deck Officer while maintaining IMO or MNTB Cadet Record Book



**Basic Training:**

1. Personal Survival Techniques
2. Fire prevention & Fire-fighting
3. Elementary First-Aid
4. Personal Safety & Social Responsibilities



**Starting Point:** **Certificate of Medical Fitness.**



**Appropriate Certificate (Certificate of Competency) as Officer in charge of an Engineering Watch (Watch-keeping Engineer Officer) under regulation III/1.**



**Oral Examination (Not mandatory in the Convention):** For W/k Engineer  
Officer Certificate



**College course (of about 6 months):** To successfully complete syllabus contained in A-III/1 (may be part of an HND or degree) during which the seafarer will also complete short Ancillary courses in -

1. CPSC&RB
2. Advanced Fire-fighting
3. Medical First-Aid



**Sea-service:** Minimum 12 months of which 6 months as Assistant Engineer while maintaining Record of Training in IMO/ MNTB/ ISF training record book.



**Basic Training :**

1. Personal Survival Techniques
2. Fire prevention & Fire-fighting
3. Elementary First-Aid
4. Personal Safety & Social Responsibility



**Workshop Training (About 18 months) :** Mechanical & Electrical (Period may vary depending on entry qualification)



**Starting Point:**

**Medical Fitness**



## ANNEX – 2

**An Outline of Marine (Mechanical and Electrical) Workshop Training (2 Years)  
 as Part of Marine Engineer Officers Training Program Referred to in A-III/1**

Each group will consist of theoretical and practical training. Of the total allocation of time under each heading, about 1/3 rd shall be utilized for initial theoretical briefing and the remaining 2/3 for hands-on practical work.

- **Safety at work** – Health and safety regulations and requirements – Employer's duty to provide safe working environment; Use of safety gears such as helmet, boots, gloves, torch etc. Working at heights and enclosed spaces; Process of Gas-freeing; Use of Oxygen, Gas detectors etc. 2 weeks
- **Familiarization with tools and equipment** – Those used in shipyards and those used on board ships; Hand tools, power tools etc. 1 week
- **Welding shop** – Flame/ Gas cutting; Welding to arrest crack (drilling hole and then V-channel welding; Overhead welding; Use of DC welding and applications; Plasma cutter; Aluminium welding technique; Brazing etc. Fire and health hazard involved in welding. 5 weeks
- **Steel fabrication** – Theory of metallurgy; Behaviours of Ferrous and non-ferrous material; Reading drawing and symbols; Heavy fabrication work, tubes, chimneys, tank making, ducting, repairs to ship's structure; 7 weeks
- **Boilers** – Different types – exhaust boilers, Cochran boiler, composite boiler; Principles and practice of modern boilers; Care of HP and LP boilers; Care of Gas and Water chambers; Testing of boiler waters and use of chemicals; Safety measures and devices in pressure vessels, monitoring equipment; Furnace inspection; 6 weeks
- **Machine shop** – All types of metal turning, milling, boring, shaping, thread cutting, slotting etc. Use of lathe machine; Use of pipe bender and rivets; Use of Grinding and scaling tools; 10 weeks
- **Drawing office** – Familiarity with shell expansion plan; drawing various parts of marine machinery and plans for alterations and repairs to ship's structures; Understand numbering of frames and plates; 4 weeks



- **Fitting shop** – Repairing, fitting of ship's auxiliaries, overhauling of generators, valves, air-compressors etc. 6 weeks
- **Pumps** – Various types – Theory and principle on which various types of pumps work; Characteristics, properties and wear of parts; repair and overhaul; 3 weeks
- **Plumbing and Carpentry** – Immediate and essential repair of leakage; Use of repair kit; bending and joints in pipes; Cutting and shaping of wood etc. 2 weeks
- **Diesel shop** – Principle of operation of diesel engines; 2-stroke and 4-stroke engines; Reversing of marine engines; Need for reduction gear; Maintenance, repair and assembly of diesel engines; Calibration and testing of fuel injection equipment; alignment and testing of marine diesel engines; 12 weeks
- **Electrical/ Electronic** – Reading wiring diagrams, knowing symbols and logics; Knowing equipment in circuit; Isolation and testing electronic items; Knowing CT/ VT and use; Wiring system on ships, Repairing of over-head crane; Galley equipment; Different types of starters; Installation of various types of electric/ electronic fittings; Repairing of electronic gadgets, Repairing of all types of AC/ DC motors and generators including armature winding; 10 weeks
- **Ship repair** – Work on board ships, Repairing main and auxiliary engines; Turbo generators; Turbines, Pumps, Valves etc. 12 weeks
- **Dry-docking and shipyard practice** – Check docking list submitted by the ship; Prepare docking plan; Sea valves; Shaft and Pintle clearance; Sacrificial Zinc Anodes etc. 4 weeks
- **Fire detection and extinction** – Shipboard fire detection system; Repair and maintenance of Sprinkler system and CO2 system; 3 weeks
- **Air-conditioning and Refrigeration** – Repair and maintenance of shipboard air-conditioning and refrigeration system; 3 weeks
- **Deck machinery** – Repair and maintenance of Windlass, Winch (steam, electrical, hydraulic, electro-hydraulic and pneumatic) and Steering gear. 3 weeks
- **Instrumentation and Control** – Theory and practice on control basics and instrument, orientation on diaphragm, actuator, gauge, solenoid, spool valves, directional valve, filter



and strainers, care of control air, reading pneumatic and hydraulic control circuits.

**3 weeks**

- **Use of Engine-room Simulator** – Computer based ERS course for engine-room operation and watch-keeping. **2 weeks.**

A total of **100 weeks** of workshop training (50 weeks per year) has been outlined above so that 2 years of workshop training followed by one year shipboard training can lead to course and examination for Engineer Officer Watch-keeping Certificate (III/1). The duration of training or its contents may be adjusted on the basis of initial entry qualification. The shipyard may also adjust the training program for better achievement of the desired goal.