Directions as to the Examination of Fishing Vessel Engineer Officers under the Merchant Shipping Acts.

The ‘Exam Directions’

Effective from 1st February 2024

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REVISION LOG

Date	Revision No.	Chapter	Comment
10/3/2017	Rev 1.01	4	Editorial change to para 4.8.
2022	Rev 2.00		Class 3 holding comment
October 2023	Rev 2.00	3	Entry requirements for initial training
October 2023	Rev 2.00	8 & 9	Addition of Chapters to include Revalidation and CECs
October 2023	Rev 2.00	Appendix 5	Addition of Appendix 5
October 2023	Rev 2.00	6	Elementary First Aid replaced with Medical First Aid requirement for Class 3 and an additional requirement for Class 2 is Advanced Firefighting.
January 2024	Rev 2.00	4	Addition of Tables for Sea service

Corrections, Errors and Omissions

Errors, omissions and suggestions for alteration of this document should be submitted in writing to the Examiner of Engineers at the address given in Chapter 1.

Chapter 1

Introduction

1.1 This publication, issued under Fishing Vessels (Certification of Deck Officers and Engineer Officers) Regulations 2022 (referred to here as the Regulations), made under section 3 and 8 of the Merchant Shipping (Certification of Seamen) Act 1979, specifies the standards of competency and the conditions to be satisfied before a certificate of competency under those Regulations will be issued. Particulars are given of the conditions of entry to, and the conduct of, the examinations to be held by or on behalf of the Department of Transport for Certificates of Competency in an engineering capacity for service in fishing vessels registered in the State.

1.2 The Regulations provide for the following classes of Marine Engineer Officer certificates : -

- Engineer Officer Certificate of Competency (Fishing Vessel) Class 1
- Engineer Officer Certificate of competency (Fishing Vessel) Class 2
- Engineer. Officer Certificate of Competency (Fishing Vessel) Class 3

Note: Certificates of Competency (Fishing Vessel) are only issued for Diesel Engine Propelled Fishing Vessels

1.3 The European Union (International Labour Organisation Work in Fishing Convention) (Safe Manning) Regulations 2023 require that every sea-going fishing vessel of greater than 15m length overall registered in the State shall carry engineer officers holding valid certificates of competency of the appropriate classes as specified on the minimum safe manning document.

Update to take account of new regulations

1.4 Where a query is raised in relation to these examination directions it should be referred to the Examiner of Engineers, Department of Transport, Dublin.

1.5 The Regulations state that certificates of service that have been issued in accordance with the 1988 Regulations shall be treated as being equivalent to an engineer officer certificate of competency (fishing vessel) of the corresponding numbered class.

1.6 Certificates of Service are no longer issued. Any existing Certificates of Service will remain valid for sea service at the level specified on the Certificate.

1.7 Any candidate wishing to change or upgrade a Certificate of Service to a Certificate of Competency at the same or a higher level shall comply with the requirements of these Directions.

1.8 Any Certificate of Competency referred to in these Directions is a Certificate issued by or on behalf of the Minister for Transport. Such Certificates may only be issued when all of the conditions relating to the issue of the Certificate have been met in accordance with these Directions. Certificates are issued on behalf of the Minster by the Chief Surveyor of the Marine Survey Office.

Applications

1.9 Where these exam directions refer to applications, unless otherwise specified, all applications must be made to the Mercantile Marine Office, Dublin.

1.10 **How to Apply.** Applicants should complete the appropriate application form available from the Mercantile Marine Office, Dublin or from www.seafarers.ie. The completed form, together with the supporting documents and appropriate fee should be forwarded to:

Examiner of Engineers,
Mercantile Marine Office
Department of Transport
Leeson Lane
Dublin 2
D02 TR60

Telephone +353 1 6783400
Fax +353 1 6783409
Email: stcw@transport.gov.ie

1.11 **In person.** Candidates may deliver application forms and documents to the Department of Transport Office during business hours. Certificates may be collected in person or by a designated agent of the candidate at the Department of Transport Office, Dublin. Candidates are recommended to make an appointment prior to calling to the office to ensure that someone will be available to deal with their application.

1.12 **Postal Arrangements**. It is recommended that applicants should use the registered postal service when sending original documents to the Mercantile Marine Office. Candidates may opt to have certificates posted out to a designated address within Ireland. The Registered Postal Service will be used for delivery of Certificates. Certificates will not be posted outside Ireland except at the written request of candidates and on the written undertaking that they accept all responsibility for the certificate in transit. The normal postal service will be used and no responsibility will be taken for lost certificates. Certificates claimed lost in this way will be dealt with as per 6.16. Overseas candidates may request that their Certificate is sent by registered post or courier and in this case they shall bear the cost of such postage**.**

Correspondence

1.13 All correspondence with the Examiner of Engineers should be made, in the first instance, through the Mercantile Marine Office, Dublin.

Seafarers Identity Number

1.14 All seafarers holding certificates or other documents issued by or under the authority of the Department of Transport are required to have a unique identity number which will appear on all certificates issued after 1st September 2016.

1.15 A seafarer identity number can be obtained by logging onto www.seafarers.ie and following the instructions.

Chapter 2

Certificates of Competency - Admission to Examinations and Award of Certificates

2.1 All written examinations for Class 1 and Class 2 will be set and marked entirely by the National Fisheries College of Ireland (N.F.C.I) Greencastle, Co. Donegal.

2.2 The Engineering Knowledge syllabuses for Class 1 and Class 2 examinations are separated into written and oral parts to allow the oral examination to be taken independently of the written papers.

2.3 A candidate must pass the written part of the engineering knowledge examination before sitting the oral part of the examination for a particular class/grade of certificate.

2.4 Candidates must pass the written part of the Engineering Knowledge (EK) examination and the oral part of the examination, for a particular class of certificate, within a three year period to retain the validity of a pass in the EK examination: The EK General paper together with the EK Motor paper must be passed at the same attempt.

2.5 **Admission to examination**: Details covering the venues, times and manner of admission to the Departments examination are as follows:-

2.5.1 The N.F.C.I , Greencastle, conducts examinations at its examination centre on behalf of the Department of Transport. The dates upon which the various examinations commence are available from the Examiners of Engineers, Mercantile Marine Office or from the Marine Notice published annually by the Department.

2.6 **Application for Examination**: Each candidate seeking admission to any Engineering Knowledge examination for a Certificate of Competency is required to complete an application form and submit it, together with proof of nationality, testimonials, birth certificate, ancillary certificates where applicable, discharge certificates or sworn declarations and pay the appropriate fee to the Superintendent of the Mercantile Marine Office. Any application in which the declaration has not been signed will not be accepted.

2.6.1 The completed form and supporting documents together with any Certificate of Competency or Certificate of Service held, are to be lodged with the Examiner not less than 6 weeks before the date of the first examination to be taken. It is important that this procedure should be observed as discharges and testimonials may have to be forwarded for verification and in the absence of such verification candidates cannot be examined. Candidates will be required to explain to the satisfaction of the examiner any gaps in this service. An application together with the fee and supporting documents may be lodged with the Mercantile Marine Office, Dublin. Notification of acceptance or rejection will be given as soon as possible after receipt of the application.

2.7 **Fees.** Each candidate will be required to pay the appropriate fee on each occasion of making application for notice of eligibility. Details of the current fees may be obtained from the Mercantile Marine Office, Dublin.

2.8 **Determination of Eligibility.** Each candidate enquiring as to their eligibility for admission to an Engineering Knowledge examination will be required to make formal application and pay the appropriate fee before assessment of their application will be made. A candidate who is found ineligible may have their fee or part thereof refunded or placed to their credit until they are eligible.

2.8.1 Candidates for Engineering Knowledge examination should apply for a Notice of Eligibility as follows:

2.8.2 **Class 3**. As early as possible. The completed application form, examination fee and supporting documentation should be forwarded to the Mercantile Marine Office, Dublin.

2.8.3 **Class 1 and Class 2**. As early as possible and preferably before attending any college course. The completed application form, examination fee and supporting documentation should be submitted to the Mercantile Marine Office, Dublin.

2.8.4 An application will only be accepted by the Department if the candidate has satisfactorily completed the initial training and/or the approved sea service requirement for the class/grade of certificate applied for.

2.8.5 Application for examination in the academic subjects should NOT be sent to the Department of Transport but to the National Fisheries College, Greencastle.

2.9 **CANDIDATES ARE ADVISED TO ENSURE AS EARLY AS POSSIBLE THAT THEY WILL BE CAPABLE OF MEETING THE REQUIREMENTS FOR THE ISSUE OF A MEDICAL FITNESS CERTIFICATE. FAILURE TO OBTAIN A MEDICAL FITNESS CERTIFICATE WILL MEAN THAT THE CERTIFICATE OF COMPETENCY CANNOT BE ISSUED.**

2.10 When a candidate's application has been approved a NOTICE OF ELIGIBILITY will be issued. This notice will specify which written examination subjects have been exempted or previously passed. It will also authorise the candidate’s admission to the engineering knowledge written and oral parts of the examination as appropriate.

2.11 Candidates will be required to make their own arrangements for the written examinations, if applicable, with the college and pay them the appropriate fee. Similarly, candidates should make their own arrangements for the oral examination with the Examiner, Marine Survey Office, Department of Transport, Dublin.

2.12 A N.F.C. certificate will be issued to candidates who are successful in the written examinations. In the event of failure in any paper of the written examinations candidates should make arrangements to re-take the failed subject(s) directly with the College and pay the appropriate College fee.

2.13 The result of the oral examination will be entered on the relevant section of the application form by the Examiner. In the event of failure in the oral examination, candidates who wish to apply for re-examination should make a fresh application. Once the application has been processed a new Notice of Eligibility will be issued. When ALL the necessary written and oral examinations have been passed a Certificate of Competency will be issued to the candidate.

2.14 **Nationality of Candidates.** *Candidates for examinations should ensure that they satisfy any visa requirements prior to enrolling in a course of study or making an application for examination. Acceptance onto a course or for an examination does not confer any rights of admission to the State. The Department of Transport will not make any representations on behalf of candidates for admission to the State.*

2.15 **Proof of Nationality:** Every candidate for a certificate of competency of any class will be required to produce proof of name, nationality and place and date of birth.

2.16 **Particulars of sea service**. A candidate's eligibility for examination will depend (among other things) upon the amount of sea service which they have performed and upon the ranks which they have held on board the various vessels in which they have been employed. It is therefore imperative that the particulars which the candidate inserts on the application form should be accurately stated and the declaration signed. The amount of service laid down in these Directions for each grade of certificate of competency is the absolute minimum that can be accepted and unless a candidate can prove the full amount they will not be admitted to the examination.

2.17 **Testimonials.** Each candidate must produce testimonials in respect of all sea service performed. These testimonials, which should state the type of main propelling machinery and the nature of duties performed, are to be signed by the Chief Engineer Officer and endorsed by the Skipper or Engineer Superintendent, or a responsible representative of the employer. Testimonials covering service as Chief Engineer Officer are to be signed by the Engineer Superintendent or a responsible representative of the employer. A recommended form of testimonial to cover sea service is shown in Appendix 4. Testimonials will be returned to candidates when the examination is completed.

2.18 A completed and signed “On Board Training Record Book” issued by the N.F.C. may be submitted in lieu of testimonials for a Class 3 Certificate of Competency.

2.19 **Fraud and misrepresentation**. Section 3 of the Merchant Shipping Act, 1979 provides that if a person makes a statement that he knows to be false or recklessly makes a statement which is false in a material particular, such as representing himself as having served in a higher capacity than their actual rank for the purpose of obtaining for themselves or for another person a certificate or

other document which may be issued under the Regulations, he shall be liable on summary conviction to a fine.

2.20 **Penalty for offering gratuity:** A candidate who offers a gratuity or inducement to any officer of the Department will be regarded as having committed an act of misconduct and will be rejected. The candidate will not be re-examined until a period of at least twelve months has elapsed. This penalty is additional to any penalty to which the candidate may be liable under criminal law.

2.21 **Unsatisfactory conduct:** Candidates who, after having signed crew agreements, have neglected to join their vessels, or who, after having joined, have deserted their vessel or who have committed misconduct on board will be required to produce a satisfactory proof of two years subsequent service with good conduct at sea, unless the Minister after investigation, should see fit to reduce this period.

2.22 **Knowledge of English** Applicants for a Certificate of Competency or for the recognition of professional qualifications for fishing vessels issued by the Government of Ireland are required to show an acceptable level of proficiency in the English language in written, oral and aural form. One of the following may be accepted as demonstrating this level of proficiency in English.

- **Marlins Test**
  A pass in the Marlins English Language Computer Test at an approved Marlins Test Centre. Approved Marlins test centres are available on the Marlin company home page **http://www.marlins.co.uk**

  The minimum acceptable pass marks (to be submitted on a Marlins approved centre stamped computer printout) are as follows:

Deck Officers	**Engineering Officers**
Senior Deck Officers (Management level) 90%	Senior Engineering Officers (Management level) 80%
Junior Deck Officers (Operational level) 80%	Junior Engineering Officers (Operational level) 70%

  In addition, as the Marlins English Language Computer Test does not cover oral English, evidence of a satisfactory level of oral English must be demonstrated. Oral English must be assessed at a centre recognised by the Department of Transport. In order to be recognised, assessors should forward details of their credentials, qualifications and competency in the English language to:

Marine Survey Office
Department of Transport
Leeson Lane
Dublin 2
Ireland
D02 TR60

Ph: +353 1 6783400
Fax: + 353 1 6783409
Email: stcw@transport.gov.ie

The recommended criteria (given at section A below) and the checklist (given at section B) should be used each time an oral assessment of an individual's level of competency

in the English language is made. A copy of the checklist is to be retained by the company and a copy of the checklist (together with any other certificates required e.g. Marlins) is to be submitted to:

Marine Survey Office
Department of Transport
Leeson Lane
Dublin 2
D02 TR60

Ph: +353 1 6783400
Fax: + 353 1 6783409
Email: stcw@transport.gov.ie

A pass in the Marlins English Language Computer Test at an approved Marlins Test Centre, as outlined above and in addition, pass in the ISF Marlins Test of Spoken English (TOSE) at an approved Marlins Test Centre. The TOSE complements the computer-based test. Approved Marlins test centres for the English Language Computer Test and the TOSE are available on the Marlin company home page http://www.marlins.co.uk. The minimum acceptable pass marks (to be submitted on a Marlins approved centre stamped computer printout) for the Marlins combined test scoring system is as follows:

Level/Department	ISF Marlins English computer test Minimum acceptable score	Test of Spoken English (TOSE) Minimum acceptable TOSE result (overall)	**Minimum acceptable combined score**
Management & Operational Level ***Navigational Dept.***			
Master/Skipper	90%	Upper Intermediate	**86%**
Other Officers	80%	Intermediate	**72%**
Engineering Dept.			
Chief Engineer Officer	80%	Intermediate	**72%**
Other Engineer Officers	80%	Lower Intermediate	**62%**

OR

- Hold an STCW Certificate of Competency as Master, deck or engineer officer for which the examinations were conducted wholly in English; **OR**

- Hold an Irish or UK Fishing Vessel Certificate of Competency as Skipper, deck or engineer officer for which the examinations were conducted wholly in English; **OR**

- Hold an English Language test certificate that is comparable to or exceeds the level of Marlins as detailed below (e.g. IELTS Level 6, Berlitz Language School level 2+ endorsed by the company, TOEFL for admission to US University); **OR**

- Other evidence of proficiency in the English language may be dealt with on a case by case basis by the Examiner (e.g. evidence of degree or diploma where the course and examinations are conducted through English).

The same English language proficiency standards apply when assessing applications for the recognition of professional qualifications as allowed for under EU legislation (Directive 2005/36/EC refers, as transposed by the European Union (Recognition of Professional Qualifications) Regulations 2017 (SI 6 of 2017).

2.23 **Issue of Certificate.** Certificates of Competency are issued at the Mercantile Marine Office, Dublin, when all parts of the examination and all other mandatory conditions governing the Certificate are successfully completed or met.

2.24 Before the holder of a Certificate of Competency of a particular grade is issued with a certificate of a higher class, that person shall surrender the first mentioned certificate to the Minister for Transport or to such person as the Minister directs, for cancellation.

2.25 **Mercantile Marine Certificates of Competency**. The holder of a fishing vessel certificate of competency that wishes to obtain a mercantile marine certificate of competency should refer to the Directions as to the Examination of Engineer Officers, Marine Engine Operators and Engine Room Watch Ratings under the Merchant Shipping Acts.

Chapter 3

Initial Training

3.1 Workshop service or other industrial training completed before the age of sixteen will not be accepted.

3.2 Each candidate must have satisfactorily completed **one** of the forms of training specified in this paragraph.

3.2.1 **Approved BIM Fishing Vessel Engineer Course**. Each candidate must have satisfactorily completed an approved engineering training course at the National Fisheries College of Ireland(N.F.C.I) , and

3.2.1.1 have obtained QQI Level 5 specific purpose certificate in fishing vessel engineering skills (PG25360) and

3.2.1.2 have satisfactorily completed twelve months approved sea service in an engineering capacity in fishing vessels of 200 kW or more registered power and which are greater than 15m length overall (remission of sea service may be granted as per chapter 4), and

3.2.1.3 have completed the tasks and assignments in an “On Board Training Record Book” issued by the N.F.C.I.

3.2.2 **Other Relevant Training programs (Recognized Apprenticeships and Technical College/University programs.)** Each candidate must have satisfactorily completed a recognized training program and provide the N.F.C.I with documentary evidence of their training and experience. All Training and experience shall be matched to the relevant modules of the Approved BIM Fishing Vessel Engineer course by the recognition of prior learning (RPL) process. Any shortfall identified in the RPL process shall be addressed by completion of the relevant module(s) for Fishing Vessel Engineer.

3.2.2.1 have completed the tasks and assignments in an “On Board Training Record Book” issued by the N.F.C.I during the sea service required by Chapter 4.

3.3 **Deficiency in training**. Any deficiency from the requirements of paragraph 3.2 will be assessed and RPL process applied in each case by the N.F.C.I and must be made good by 'off the job' training, or by further workshop service of a suitable character, or by compensatory shipboard service as an engineer officer or trainee engineer as agreed with the Examiner of Engineers.

3.3.1 **Compensatory shipboard service** must be performed in ships or fishing vessels of not less than the registered power requirements relative to the Class of certificate being applied for. Such service may be performed on regular watch or on day work irrespective of whether a crew agreement is, or is not, in force. Time so spent will be accepted as having the same value as suitable workshop service. The period of compensatory

shipboard service required will not exceed two years. Compensatory shipboard service performed before the age of eighteen years will not be accepted.

3.4 Testimonials. Each candidate will be required to produce authoritative testimonials covering all of their training and post training employment in the engineering industry. These testimonials should state the name of the employee concerned, the dates of commencement and termination of employment, the capacities in which the person was employed, and give a summary of work undertaken. Testimonials must be signed by the employer or a responsible representative.

3.5 Testimonials will be returned to candidates when the examination is completed.

Chapter 4

Sea Service - Approved Sea Going Service

4.1 Approved sea going service means service under crew agreement as engineer officer or assistant engineer on regular watch over main propelling machinery.

4.2 A minimum of six months approved sea going service for any certificate of competency must have been performed within a period of five years preceding the date of the examination. The remaining approved sea going service must have been performed within a period of ten years preceding the date of the examination.

4.3 To be eligible to sit for a **Class 3 Certificate of Competency (Fishing Vessel)** a candidate must, in addition to meeting the initial training requirements set out in Chapter 3, have satisfactorily completed approved sea going service in an engineering capacity in fishing vessels of 200 kW or more registered power. The amount of sea service required:

Initial Training Route	**Sea service Requirements**
Fishing Vessel Engineer course	12 months (Included as part of Initial training course)
Fishing Vessel Engineer course and successful completion of GES 1 & 2	9 months
Other relevant Technical Training program qualifications	6 months minimum depending on recognized prior learning assessment

4.4

To be eligible to sit for a **Class 2 Certificate of Competency (Fishing Vessel)** a candidate must in addition to meeting the initial training requirements set out in Chapter 3 have not less than 12 months approved sea going service in fishing vessels of 350 kW or more registered power.

Initial Training Route	**Sea service Requirements**
Fishing Vessel Engineer course (Excluding GES 1&2)	12 months (Included as part of Initial training course) plus 12 months **Total 24 months**
Fishing Vessel Engineer course (Including successful completion of GES 1&2 as part of Initial training within the same academic year)	9 months (Included as part of Initial training course) plus 12 months **Total 21 months.**
Other relevant Technical Training program qualifications. (Remission may be granted as per 4.8.3)	12 months reduced to not less than 6 months depending on recognized prior learning assessment. **Total 6 to 12 months.**

4.5 To be eligible to sit for a **Class 1 Certificate of Competency (Fishing Vessel)** a candidate must have not less than 24 months approved sea going service of which not less than 12 months must have been served in fishing vessels of 350 kW or more registered power while holding a Class 2 Certificate of Competency (Fishing Vessel) and at least 6 months of the 24 months sea going service must have been served in vessels over 750 kW.

4.6 Verification of Service

4.6.1 Sea service is to be verified by either a Sea Service Testimonial (see Appendix 3 for suggested style) or a proper reference from an Agent, Owner or other recognised official. Sea service which cannot be properly verified will not be accepted.

4.6.2 A completed and signed “On Board Training Record Book” issued by the N.F.C.I may be submitted in lieu of testimonials for a Class 3 Certificate of Competency.

4.7 Calculation of Service

4.7.1 Sea service which has been properly verified will be reckoned by the calendar month, that is, the time included between any given day in any month and the preceding day of the following month, both inclusive. The number of complete months from the commencement of the period, ascertained in this way, should be computed, after which the number of odd days should be counted. The day on which the voyage commenced, as well as that on which it terminates, should both be included, all leave of absence excluded, and all odd days added together and reckoned at thirty days to the month.

4.8 Remission of approved sea service for various examinations is granted as follows:-

4.8.1 Class 3 each candidate that has successfully completed the GES1 and GES2 written examinations may be granted 3 months remission from the 12 months sea service specified in paragraph 3.2.1.2.

4.8.2 Under no circumstances will the sea service for a Class 3 certificate be reduced to less than 6 months by remission.

4.8.3 Class 2 each candidate that has satisfactorily completed a recognised relevant technical training programme, may be granted up to 6 months remission from the required 12 months sea going service This shall be assessed on a case by case basis by the Examiner of Engineers.

4.8.4 In recognition of the structured nature of shore-based training the candidate may be granted two days remission of approved sea service for every day spent on an acceptable and relevant formal training course, up

to a maximum of 90 days. This shall be assessed on a case by case basis by the Examiner of Engineers.

4.8.5 A relevant formal training course may be any described under the broad headings of instrumentation/control, welding, fitting, turning, ship management, pollution prevention or machinery manufacturers' courses. This shall be assessed on a case-by-case basis by the Examiner of Engineers.

4.8.6 It will be necessary to provide documentation to authenticate course attendance. A specimen testimonial is given at Appendix 4 which shows the kind of information required.

4.9 Sea service other than that detailed in the preceding paragraphs may be considered on a case-by-case basis by the Examiner of Engineers. Candidates claiming such sea service should submit full details of the sea service performed to the Examiner of Engineers for consideration.

Chapter 5

Certificates of Competency - Exemptions and N.F.C. Greencastle Written Examinations

5.1 The written academic subjects – thermodynamics, mechanics, electro technology and naval architecture are examined by The National Fisheries College of Ireland, Greencastle.

5.2 The Engineering Knowledge syllabuses for the Class 1 and Class 2 examinations are separated into written and oral parts, the written papers are referred to as the PROFESSIONAL subjects and are examined by The N.F.C.I

5.2.1 **The Class 1 EK written syllabus** is mainly concerned with the constructional details, the working principles and with the operation, testing and maintenance of marine systems and equipment. The Class 1 oral syllabus is mainly concerned with the operational and emergency procedures directly related to the safety of the ship and the protection of the environment. The legal and management responsibilities of the chief engineer officer are reflected in the syllabus as a whole.

5.2.2 **The Class 2 EK written syllabus** is mainly concerned with the constructional details and working principles of marine systems and equipment. The Class 2 oral syllabus is mainly concerned with the safe and efficient operation of plant, the correct use of equipment provided for the safety of the ship and the protection of the environment. The legal and management responsibilities of a certificated engineer officer are reflected in the syllabus as a whole taking into account that the Class 2 engineer may act as Chief Engineer on ships of less than 3000 kW registered power.

5.3 **Exemptions**. Candidates who have passed the terminal examination of courses specified in this paragraph, to the standard required by the Department of Transport, may be granted exemptions from academic papers of the examinations on a subject for subject basis, the subjects being those stipulated on the terminal certificate of the course.

5.3.1 Candidates who have satisfactorily completed relevant courses under the Engineer Cadet Training Scheme (STCW) may be granted exemptions from the Class 1 and Class 2 examinations.

5.3.2 Candidates who have completed courses leading to a degree in Marine or Mechanical Engineering may be granted exemptions from Class 1 and Class 2 examinations.

5.3.3 Candidates who have completed courses leading to other qualifications in engineering may also be considered.

5.3.4 Candidates who are not granted exemptions will be required to pass all, or the remaining, academic subjects conducted by N.F.C.I Partial passes

or exemptions from examinations administered by other administrations will not be recognized or accepted.

5.3.5 No exemption will be granted from the Engineering Knowledge written or oral examinations. All oral examinations will continue to be conducted by the Department of Transport examiners.

5.4 Examinations for Certificates of Competency

5.4.1 **Class 3** The examination will be **oral** only.

5.4.2 **Class 2** The examination will consist of the following

Academic Subjects

General Engineering Science I
(one paper of 2 hours)
General Engineering Science II
(one paper of 2 hours)

Professional Subjects

Engineering Knowledge (two papers, each of 2 hours)
Oral examination

5.4.3 **Class 1** The examination will consist of the following:

Academic Subjects:

Applied Mechanics (one paper of 3 hours)
Applied Heat (one paper of 3 hours)
Electrotechnology (one paper of 3 hours)
Naval Architecture (one paper of 3 hours)

Professional Subjects:

Engineering Knowledge (two papers, each of 3 hours)
Oral Examination.

5.5 **Permitted attempts**

5.5.1 A candidate may present themselves for the academic subjects of the Class 1 or Class 2 examination, or the remaining subjects from which they have not been exempted, at any time during or after completing the training required in Chapter 3, except that in the case of the Class 1 academic subjects they must have previously passed the General Engineering Science I and II at Class 2 level or been exempted from them.

5.5.2 A candidate may present themselves for the professional subjects of the Class 1 or Class 2 examination at any time after they have completed the

necessary period of training and approved sea service, except that in the case of the Class 1 examination they must also be in possession of a Class 2 Certificate of Competency.

5.5.3 A candidate who is successful in passing any of the academic subjects in the Class 1 or Class 2 examinations will not be required to resit that subject at subsequent attempts. The engineering knowledge written papers form a single part of the examination and must be passed at the same attempt. A candidate must pass the written part of the engineering knowledge examination before sitting the oral part of the examination for a particular class/grade of certificate. A candidate must pass the oral part of the examination for a particular class/grade of certificate within a three year period of passing the engineering knowledge written papers to retain validity of a pass in the E.K. examination.

5.6 **Re-examination**. Each candidate who fails the oral examination will need to make a fresh application and pay the appropriate fee.

5.7 **Repeated Failure in Engineering Knowledge**. A candidate who shows ignorance of topics vital to an engineer officer's duties and which, if neglected could lead to conditions whereby life and or the ship is endangered will not be accepted for re-examination until they have performed a further period of sea service to be determined by the Department of Transport.

A candidate who, after three attempts at the Engineering Knowledge examination in any twelve month period, shows no improvement, may not be accepted for re-examination until they have performed a further period of sea service to be determined by the Department of Transport.

5.8 **Pass Marks.** Each candidate will be required to obtain a minimum of fifty per cent of the total marks in each subject attempted in the written examination. A higher standard will be required in the oral examination.

Procedure for Applying for Review of Examination Scripts and Appeal of Marks Awarded

5.9 N.B. Applications for appeal of results relating to an earlier attempt at an examination, where the candidate has already made a further attempt at the particular subject, will not be permitted.

5.10 Phase 1. The student should write to the Principal, N.F.C.I , requesting to see their examination paper.

At this stage a person nominated by the college will be present with the candidate throughout the viewing of the examination paper. One other person may accompany the student. The script will not be permitted to be copied or marked in any way. No cameras, mobile phones or writing instruments of any kind will be permitted to be used by the student or accompanying person during the viewing process. No discussion shall take place between the nominated person and the candidate.

Any administrative fee levied for this phase will be a matter for the college to determine and to promulgate accordingly.

5.11 Phase 2. If the student is not satisfied, they should write to the Principal, N.F.C.I requesting that an administrative check is carried out. This involves a check of the marking process and the additions of the marks. The NFC will then advise the candidate of the result of the review.
Any administrative fee levied for this phase will be a matter for the college to determine and to promulgate accordingly.

5.12 Phase 3. If the student, not being satisfied, wishes to appeal the marks awarded, they should write to the Principal, N.F.C.I requesting that the examination script is reviewed by another examiner at the college*. This review does not exclude the original examiner. The N.F.C.I will then advise the candidate of the result of the review.

Any administrative fee levied for this phase will be a matter for the college to determine and to promulgate accordingly.

*In the case where no alternative examiner is available, phase 3 may be omitted.

5.13 Phase 4. The student, not being satisfied with the result of the appeal in phase 3, or where no other college examiner is available, should write to the Principal, N.F.C.I requesting that the examination script be reviewed by the Examiner of Master, Mates and Fishermen or the Examiner of Engineers as appropriate. A discussion will take place between the Examiner of Engineersand the original examiner to agree on a result. In the case of disagreement the examiner of Master, Mates and Fishermen or the Examiner of Engineers, as appropriate will have the final say. The Department of Transport will not charge a fee for this phase.

5.14 The N.F.C.I will then advise the candidate of the result of the appeal.

Dyslexia

5.15 Dyslexia Policy for Examination and Assessment Procedures

5.15.1 Examinations require students to demonstrate knowledge and understanding of the subject through timed assessments. During the examination students are expected to select and manipulate thoughts and transfer these concepts into written format. This process emphasises a dyslexic student's difficulties.

5.15.2 Candidates undertaking study and written examinations for Class 1 and Class 2 certificates of comeptency may avail of the NFCI policy and procedures relating to examinations.

5.15.3 The courses of study mentioned above normally lead to a career at sea and in order to obtain a seafaring qualification or Certificate of Competency further oral and written examination is required.. Seafaring is a regulated profession, and examinations leading to Certificates of Competency in the . Fishing Industry are conducted by . Bord Iaschaigh Mhara (BIM) at the NFCI and accepted by the Department of Transport (DoT) which has responsibility for regulation in this area, and ensuring safety of life at sea and pollution prevention.

5.15.4 Candidates undertaking written examinations conducted by the NFCI, on behalf of the DoT, who have been diagnosed as dyslexic by an educational psychologist may be allowed an extra 10 minutes for each hour of normal examination time, and/or the use of acetates or tinted film if required.

5.15.5 The time allowance is applicable only to those professional written examinations leading directly to a deck or engineer certificate of competency, and does not apply to ancillary courses such as radio certificates, first aid etc.

5.15.6 Where possible, candidates having extra time may be accommodated in a separate examination room, or at the back of the room, so that they are not disturbed by the main body of students departing at the end of normal examination time.

5.15.7 Given the safety critical nature of the tasks which holders of a Certificate of Competency perform, and the conditions under which they carry them out, the use of readers, amanuensis (scribes), computers or other aides that could not reasonably be brought to sea and used under emergency conditions will not be allowed.

5.15.8 Allowances may be made by Examiners for spelling errors and composition of passages, provided that the meaning of the answer is clear to the Examiner. Clerical errors in safety related calculations will be dealt with in the same way for all candidates.

5.15.9 Candidates that have been diagnosed as dyslexic must have documented written proof of this diagnosis, in the form of an assessment report, if they wish to avail of extra time.

5.15.10 Candidates wishing to apply for extra time should contact their personal or course tutor who will guide them through the procedure.

5.15.11 Some groups of examinations must be completed within a specified period prior to the issue of a Certificate of Competency - no concession is granted in respect of this requirement.

5.16 Initial Action

5.16.1 If you think that you may be dyslexic, there are a number of on-line tests that may help you decide if formal assessment is appropriate.

5.16.2 If you have been clinically assessed as having dyslexia and wish to request additional examination time, your initial action should be to contact your personal or course tutor. They will be able to guide you through making the application.

5.17 Assessment Report

5.17.1 For the purposes of gaining additional time in written examinations leading to a Certificate of Competency, an assessment report will be accepted from a qualified Educational Psychologist. Further information may be obtained from the Dyslexia Association of Ireland and the Psychological Society of Ireland.

5.17.2 Assessments must have been carried out as an adult (post 16 years old), include cognitive assessment, and clearly identify dyslexia as a significant learning difficulty.

5.17.3 All candidates attending courses of study leading to Certificates of Competency are strongly recommended to obtain a Certificate of Medical Fitness for service at sea prior to commencing a course. The medical examination for a Certificate of Medical Fitness does not test for dyslexia; however seafarers with dyslexia may have difficulty with vision testing, and should discuss this with the approved doctor conducting the examination.

5.18 Administrative Procedures

5.18.1 Dyslexic candidates putting themselves forward for DoT examinations should notify the examination centre at least 2 weeks in advance of the examination, together with supporting documentation. NFCI/BIM will liaise with the Department of Transport and advise the examination centre invigilator of any additional time granted.

5.18.2 Once an increased examination time has been agreed it will remain valid for all future examinations until the tenth anniversary of the assessors report, without reference to the DoT.

5.18.3 Examination centres may seek to recover the additional costs incurred by the supervision of the additional examination room and/or examination time. You should talk to the examination centre concerned to find out their policy.

5.19 Examination Results

5.19.1 Once a candidate has been given additional time in an examination, they may not have their dyslexia raised as an issue for special considerations.

Chapter 6

Certificates of Competency - Conditions of issue.

6.1 To qualify for the issue of a Class 3 Certificate of Competency, each candidate must:

6.1.1 Be not less than eighteen years of age.

6.1.2 Satisfy the initial training requirements set out in Chapter 3.

6.1.3 Have completed the approved sea service set out in Chapter 4.

6.1.4 Pass the examinations for Class 3 set out in Chapter 5.

6.1.5 Hold an STCW Fire Prevention and Fire Fighting certificate issued within the previous 5 years.

6.1.6 Hold a valid STCW Medical first Aid issued within the previous 5 years.

6.1.7 Hold a valid STCW Personal Sea Survival Techniques course certificate issued within the previous 5 years.

6.1.8 Hold a valid Seafarers Medical Fitness certificate.

6.2 To qualify for the issue of a Class 2 Certificate of Competency, each candidate must:

6.2.1 Be not less than eighteen years of age.

6.2.2 Satisfy the initial training requirements set out in Chapter 3.

6.2.3 Have completed the approved sea service set out in Chapter 4.

6.2.4 Pass the examinations for Class 2 set out in Chapter 5.

6.2.5 Hold an STCW Fire Prevention and Fire Fighting certificate issued within the previous 5 years.

6.2.6 Hold an STCW Advanced Firefighting certificate issued within the last 5 years.

6.2.7 Hold a valid STCW Medical First Aid Certificate issued within the previous 5 years.

6.2.8 Hold a valid STCW Personal Sea Survival Techniques course certificate issued within the previous 5 years.

6.2.9 Hold a valid Seafarers Medical Fitness certificate.

6.3 To qualify for the issue of a Class 1 Certificate of Competency, each candidate must:

6.3.1 Hold a Class 2 Certificate of Competency

6.3.2 Have completed the approved sea service set out in Chapter 4.

6.3.3 Pass the examinations for Class 1 set out in Chapter 5.

6.3.4 Hold an STCW Advanced Fire Fighting certificate issued within the previous 5 years.

6.3.5 Hold an STCW Fire Prevention and Firefighting certificate issued within the last 5 years.

6.3.6 Hold a valid STCW Medical First Aid Certificate issued within the previous 5 years.

6.3.7 Hold a valid STCW Personal Sea Survival Techniques course certificate issued within the previous 5 years.

6.3.8 Hold a valid Seafarers Medical Fitness certificate.

6.4 Lost Certificates

Application for a certified copy of a lost Certificate of Competency should be submitted to the Mercantile Marine Office together with the appropriate fee. A declaration as to the circumstances in which the certificate was lost must be made by the applicant. A certified copy of the certificate will be delivered to the applicant in due course. No fee is chargeable if the applicant can show that the certificate was lost through shipwreck or fire.

A lost Certificate of Service will be replaced by a letter confirming that the named person held a Certificate of Service at the level specified.

Chapter 7

Examination Syllabuses

The Department of Transport examinations in the Regulations, are based on the syllabuses contained in this chapter. The examinations will use the SI system of units, or where this is impractical the appropriate technical unit.

The syllabuses are progressive from grade to grade. The syllabus for a higher grade of certificate in both written and oral examination is always regarded as including the syllabus for the corresponding subject, if any, for certificates of a lower grade. Questions in the examination may be set combining more than one of the paragraphs in the syllabus.

Although English is not included in these syllabuses as a separate subject, candidates are expected to show a good standard of English in their descriptive answers and the marks obtained will to some extent be a reflection of their skill in the use of English.

Class 3 Certificate of Competency

SYLLABUS

ENGINEERING KNOWLEDGE - ORAL EXAMINATION

Class 3 Certificate of Competency (Fishing Vessel). Engineering Knowledge is the only subject and the oral examination will cover the following topics:-

Preparing main and auxiliary machinery for sea, testing of steering gear.

Recording of engine room log book and understanding significance of readings taken.

Routine pumping operations of fuel oil, fresh and salt water and bilge system, location of common faults.

Preparing, starting, coupling and changing over alternators or generators.

Safety precautions to be observed during a watch and the immediate actions to be taken in the event of a fire or accident, including electric shock.

Precautions to be observed to prevent environmental pollution.

Knowledge and application of MARPOL and its Annexes

Operation and maintenance of emergency and fire fighting equipment

Operation of auxiliary boilers including combustion system, methods of checking water level and action necessary if water level is abnormal. Recognition of boiler water contamination.

Location and rectification of common faults in machinery and plant.

Life Saving Appliances, their location and operation.

Knowledge of safe working practices on fishing vessels and knowledge of appropriate Marine Notices.

Recognition of enclosed spaces and the dangers of enclosed spaces. Entry and rescue procedures in enclosed spaces.

Routine testing and maintenance of fire detection and alarm systems.

Working knowledge of electrical distribution systems on board fishing vessels up to 1000v. Knowledge of the dangers of HV distribution systems. Knowledge of emergency power supplies.

Methods of manoeuvering, including bridge control systems and variable pitch propellers. Emergency controls for engine, propulsion and steering.

Class 2 Certificate of Competency

ACADEMIC SUBJECTS

General Engineering Science I

Mathematics	Arithmetic Algebra Graphs Trigonometry Geometry Mensuration
Applied Mechanics	Units Kinematics Dynamics Statics Friction Machines Strength of materials Fluids at Rest Transverse Stability

General Engineering Science II

Heat Engines	Heat engines Gas Laws Combustion Refrigeration
Electrotechnology	Nature of Electricity Electric Currents Electric Circuits Resistance Secondary Cells Magnetic Fields Electromagnetic Induction Measuring instruments & measurements.

ACADEMIC SUBECTS

Applied Heat

1. Pressure, Temperature, Energy

Recognises and measures the effect of pressure in fluid. Defines and measures temperature. Discusses heat as a form of energy, specific heat capacity, sensible heat, latent heat and solves associated problems. Discuss the physical changes of solids and liquids associated with changes in temperature.

2. Heat Transfer

Describes the way in which heat may be transferred and the factors which may influence heat transfer. Solves simple problems involving conduction, convection and radiation.

3. Internal Energy, Thermodynamic Systems, First Law

Defines and describes thermo-dynamic systems and solves problems involving the First Law of Thermodynamics.

4. Gas Laws, Displacement, Work

Solves simple problems involving the basic gas laws. Describe processes which will produce a change of state in a non-flow system and solves problems concerned with non-flow processes.

5. Ideal Cycles, I.C. Engines

Sketches p-V diagram and describes the operation for the ideal constant volume (Otto) cycle, the Diesel cycle and the Dual Combustion cycle. Determines indicated power, brake power and mechanical efficiency of an I C engine and solves problems involving power, efficiency, fuel consumption and heat balance.

6. Air Compressors

Describes the factors which influence the performance of a reciprocating air compressor and solves simple problems involving single state, single acting, compressors.

7. Working Fluids

Recognises the differences in the properties of vapours, gases and the perfect gas and uses the steam tables to solve simple problems related to water and steam in the wet, saturated and superheated states.

8. Nozzles, Steam Turbines

Solves simple problems involving the flow of steam through a nozzle.

9. Refrigeration

Understands the concepts of the reversed heat engine cycle and its application to vapour compression refrigeration plant and solves simple problems.

10. Combustion

Discusses the combustion of solid and liquid fuels by mass in terms of theoretical air and excess air required and the products of combustion. Solves problems involving the combustion of a fuel.

11. Boiler Feed Densities

Discusses the effect of using feed water containing dissolved solids on boiler and evaporating plant. Solves simple problems on the change in density of boiler and evaporator plant due to build up of dissolved solids during intermittent and continuous blowdown.

Applied Mechanics

1. Statics

Solves problems involving forces in static equilibrium. Discusses pin jointed frameworks and their solution. Solves problems involving centres of gravity arid centroids.

2. Friction

Discusses the effects of friction when one rigid body slides or tends to slide over another rigid body.
Solves problems involving linear, angular and relative motion. Describes the motion of projectiles and solves associated problems involving moving objects. Understands and uses the concept of relative velocity.

3. Dynamics

Discusses the concepts of force and energy and solves associated problems. Discusses centripetal and centrifugal effects and solves associated problems.

4. Machines

Discusses the principles of simple machines and solves associated problems.

5. Strength of Materials

Discusses the effects on a material caused by the application of external forces and solves associated problems. Discusses the effects of temperature change on materials. Solves problems involving stress in thin rotating rims. Solves problems involving cantilever and simply supported beams. Solves problems involving torsion on circular shafts.

6. Hydrostatics

Discusses principle of Archimedes and solves associated problems. Solves problems involving hydrostatic forces on immersed areas.

7. Hydrodynamics

Solves problems related to liquids in motion.

Marine Electrotechnology

1. Electric and Electronic Components

Understands the physical construction and characteristics of basic components.

2. Electric Circuit Principles

Understands the operation of simple linear DC and AC electrical circuits and solves related problems

3. Electromagnetism

Understands the principles of magnetism and electromagnetic induction.

4. Electric Machines

Understands the principle and application of dc and ac motors and generators.

Naval Architecture

1. Hydrostatics

Understands the principles of flotation. Describes the use of TPC in calculating displacement and effect of addition of masses on draught. Calculates change in mean draught due to change in density. Describes the co-efficients of form and their uses. Describes the wetted surface area and calculates its value.

2. Simpson's Rule

Applies Simpson's Rule to the determination of areas, volumes and masses and first moments of area, volume and mass.

3. Ship Stability

Calculates the position of the centre of gravity of a ship under any condition of loading. Understands the term stability and the importance of the centre of buoyancy, centre of gravity and transverse metacentre with regard to stability. Solves problems on the change in mean draught due to bilging including the effect of permeability and the effect of transverse stability.

4. Ship -Resistance

Understands the basic factors involved in the resistance to motion exerted by water on a ship moving through it.

5. Propellers

Understands basic propeller terminology.

6. Admiralty Coefficients

Uses Admiralty Coefficient as an approximate method of estimating power.

7. Fuel Consumption

Calculates the variation in fuel consumption with speed and the fuel required to be loaded for a given voyage.

8. Ship Terminology

Knows ship terminology.

9. Ship Construction

Distinguishes between the different framing systems used in construction of ships. Recognises the design features of various types of ships. Understands the functions and constructional details of components of the ships structure. Distinguishes between different types of rudders, their construction, and their integration into the ship structure. Understands the arrangement and method of operation of anchor equipment.

10. Ship stresses.

Recognises the causes and effects of stresses acting on ships.

11. Ventilation

Recognises the need for shipboard ventilation and how this is carried out.

12. Drainage of Compartments

Understands the need for the safe drainage and/or filling of compartments and how this is carried out.

Class 1 and Class 2 Certificate of Competency

PROFESSIONAL SUBJECTS

Engineering Knowledge

The **Class I** Engineering Knowledge written syllabus is mainly concerned with the constructional details, the working principles and with the operation, testing and maintenance of marine systems and equipment The Class 1 oral syllabus is mainly concerned with the operational and emergency procedures directly related to the safety of the ships and the protection of the environment. The legal and management responsibilities of the Chief Engineer are reflected in the syllabus as a whole. The engineering knowledge to be shown by candidates is that which is required for the operation and maintenance of the machinery, equipment and ship structures usually in charge of the Chief Engineer officer.

The **Class 2** Engineering Knowledge written syllabus is mainly concerned with the constructional details and working principles of marine systems and equipment associated with ships of limited registered power. The Class 2 oral syllabus is mainly concerned with the safe and efficient operation of plant, the correct use of equipment provided for the safety of the ship and the protection of the environment. The legal and management responsibilities of a certificated engineer officer are reflected in the syllabuses as a whole. The engineering knowledge to be shown by candidates is that which is required for the operation and maintenance of the machinery, equipment and ship structures usually in charge of the engineer officer.

1. Manufacturing methods for various machinery components and the physical properties of the materials commonly used. Ability to transmit information relating to machinery components by means of simple drawings with supplementary notes, specifications and dimensions.

2. Working principles and constructional details of sensing and monitoring devices associated with marine equipment

3. Pumping systems

   Working principles and constructional details of pumps.
   General requirements for pumping systems.
   Care and management of pumping systems.
   Bilge, ballast and fire pumps, pumping and priming systems.

4. Pollution Prevention

   Working principles and constructional details of oily water separators.
   Care and management of oily water separator equipment.
   Working principles and constructional details of sewage treatment plant
   Prevention of air pollution
   Garbage management

5. Manoeuvring

   Methods of maneuvering, including bridge control systems and variable pitch propellers.
   Propulsion and transmission systems, including thrust and shaft bearings, stern tubes, propellers and bow thrusters.
   Emergency Controls. Procedures to be adopted for operating main machinery under emergency conditions.
   Construction and arrangements of steering systems.
   Care and management of steering systems.

6. Refrigeration machinery and air conditioning systems.

7. Fresh water production and treatment systems.

8. Deck machinery and cargo/fish handling systems, hydraulic systems

9. Steam boiler/Thermal oil plant

   Boiler water gauges
   Boiler water testing and conditioning. Oil testing.
   Care and management of auxiliary boilers
   Constructional details of auxiliary boilers – steam, thermal oil and hot water.
   Mountings and feed water/oil systems. Assessment of plant efficiency.
   Control and alarm systems associated with automatic operation of steam and thermal oil plant plant.
   Safety features related to boilers and thermal oil plant.

10. Marine diesel engines

    Trunk and crosshead types
    Safe and efficient operation and maintenance of marine diesel engines.
    Working principles and constructional details of marine diesel engines
    Turbochargers and principles of operation of gas turbines.
    Auxiliary diesel engines and associated equipment.
    Control and alarm systems associated with automatic operation of a diesel plant.
    Fuel oil, lubricating oil, and cooling systems of diesel engines together with ancillary systems including separators, filters, pumps, heat exchangers and controls.
    Safe and efficient operation and maintenance of marine diesel engines
    Gearing systems and clutches.
    Starting and reversing systems.
    Working principles and constructional details of air compressors, air receivers and associated equipment.
    Assessment of engine power, the running adjustments to maintain performance.
    Effect of maintenance and adjustments on air pollution prevention.

11. Knowledge of:

Functions and use of life-saving appliances
The type of information issued by the Department of Transport with regard to Safety at Sea.
Material Safety Data Sheets
Constructional details and maintenance of plant and equipment specifically used with dangerous substances.

12. Safety in general

Code of Safe Working Practices.
Dangers of entering enclosed spaces.
Methods of damage control with specific reference to action to be taken in the event of flooding of seawater into the engine-room and adjacent spaces.

13. Fire Safety

Precaution against fire or explosions, explosive mixtures, sources of ignition.
Principles of fire prevention, detection and extinction in all parts of a ship.
Structural fire protection arrangements.
Testing and maintenance of fire detection and fixed fire extinguishing systems.
Testing of firemen's outfits including B.A. sets.
Operation, maintenance and testing of fire pumps and associated pumping systems.
Control and organisation of fire and damage control parties.
Construction, maintenance and, operation of fire fighting equipment.

14. Operation, testing and fault rectification of automatic control systems and alarm panels.

15. Safe and efficient operation in the UMS mode

16. Electrical

Constructional details of alternators, generators, motors, switch gear and batteries.
Electrical distribution systems AC and DC up to 1000V.
Distinguish between high and low voltage systems. Understand precautions to be taken when working with HV equipment, including obtaining suitable training.
Operational practice and fault finding associated with electrical systems
Operation, testing and fault rectification of basic automatic control systems and alarms panels.
Emergency power systems AC and DC.

17. Constructional details of ships

18. Drydocking management, hull inspection and repair procedures. Survey procedures. Role of classification and flag State. Port State control for fishing vessels.

19. Personnel management, organization and training aboard fishing vessels. and certification requirements of crew.

20. Routine operational duties and the effect of legislation on engine room operations.

21. Knowledge of international law as embodied in international agreements and conventions as they affect the specific obligations and responsibilities of the engine department, particularly those concerning safety and the protection of the marine environment, including arrangements for implementing international agreements and conventions.

Chapter 8

CONTINUED PROFICIENCY AND UPDATING OF SAFETY TRAINING, REVALIDATION OF CERTIFICATES.

8.1 All certificates of competency and certificates of equivalent competency need to be revalidated or renewed, at five yearly intervals, if the holder wishes to continue to be able to serve at sea. All certificates issued to Engineer Officers will have a maximum validity of five years and will become due for revalidation on or before the expiry date shown in the certificate.

8.2 When a certificate is being revalidated the certificate and endorsement will be reissued as a new document.

8.3 Certificates may be revalidated up to six months prior to the expiry date. In such cases the expiry date of a new certificate will be five years from the date of expiry of the previous certificate.

8.4 **Certificates of Competency**. To fulfil the requirements for revalidation certificate holders will have to show medical fitness and a continued level of safety training by:

8.4.1 holding an approved and valid Medical Fitness Certificate (maximum validity **two years)** and.

8.4.2 having attended approved training or updated training within the previous 5 years relevant to the certificate to be revalidated as per the conditions of issue set out in chapter 6.

8.5 **Certificates of Equivalence.** To fulfil the requirements for revalidation certificate holders will have to show medical fitness and a continued level of safety training by:

8.5.1 holding an approved and valid Medical Fitness Certificate (maximum validity **two years)** and.

8.5.2 having attended approved training or updated training within the previous 5 years relevant to the certificate to be revalidated as per the conditions of issue set out in chapter 6.

8.5.3 Holding a valid certificate of competency issued by a recognised country.

Chapter 9

Certificate of Equivalent Competency

9.1 A Certificate of Equivalent Competency (CEC) is required by officers holding non-Irish certificates working on Irish-registered fishing vessels.

9.2 A certificate of competency granted by another recognised country may be endorsed to attest its recognition and the endorsement will be in the form of a separate document called a Certificate of Equivalent Competency. Holders of Irish Certificates of Equivalent Competency (CECs) may serve in the appropriate position on Irish registered fishing vessels.

9.3 An Irish Certificate of Equivalent competency (CEC) may be issued to officers holding a valid certificate of competency that has been issued by a competent authority of another State which Ireland recognises. An applicant for a Certificate of Equivalent Competency may be required to provide details of the training required to obtain their original certificate to show that it is equivalent to the level of Irish certificate of competency being applied for.

9.4 CECs require periodic revalidation as per Chapter 8 and will remain valid only if the original certificate remains valid. The original certificate must always be carried with the CEC.

9.5 A CEC will not be issued with limits that are not issued to holders of an Irish CoC.

9.6 A CEC will not be issued with limits for service in the Near Coastal Area of the country that issued the original certificate of competency unless an agreement is in place with the issuing party[1]

9.7 Officers applying for a CEC must:

9.7.1 Be in possession of a valid medical fitness certificate and

9.7.2 Meet the requirements for safety training as per the conditions referred to in chapter 6 which is relevant to the level of certificate being applied for.

9.7.3 Submit the required documentation to have their national certificate assessed by the Examiner of engineers to determine the standards and conditions that they have achieved unless otherwise determined in accordance with the table in Appendix 5.

[1] Near Coastal Area limits issued by the UK Maritime and Coastguard Agency will, in general, be recognised.

9.7.4 Meet the requirements to show an acceptable level of proficiency in the English language in written, oral, and aural form referred to in Chapter 2.

9.7.5 Apply for CEC to the Mercantile Marine Office – refer to Chapter 1

9.8 **Immigration Rules:** CEC applicants who are not nationals of EU countries or of the United Kingdom should note that they may need to have a work permit if they are intending to work on a fishing vessel which operates solely within Irish territorial waters.

Appendix 1

Column 1	Column II		
Registered Power (kilowatts)			
	Chief Engineer Officer	**Second Engineer Officer**	**Third Engineer Officer**
3000 and over	Class 1	Class 2	Class 3
750 or more but under 3000	Class 2	Class 3	--

Appendix 2

Timetable of Examinations

CLASS 2

Day	Part of Examination	Morning Session	Afternoon Session
By arrangement with NFC Greencastle	Professional	Engineering Knowledge (one paper – 2 hours)	Engineering Knowledge (one paper 2 hours)
	Academic	General Engineering Science I (one paper – 2 hours)	General Engineering Science II (one paper – 2 hours)

CLASS 1

Day	Part of Examination	Morning Session	Afternoon Session
By arrangement with NFC Greencastle	Professional	Engineering Knowledge (one paper – 3 hours)	Engineering Knowledge (one paper 3 hours)
	Academic	Electrotechnology (one paper – 3 hours)	Naval Architecture (one paper – 3 hours)
		Applied Mechanics (one paper – 3 hours)	Applied Heat (one paper – 3 hours)

Appendix 3

Sea service testimonial – sample

This form is to be used when the engineer officer or the Chief Engineer under whom the officer serves leaves the vessel.

COMPANY NAME

SEA SERVICE TESTIMONIAL – ENGINEER OFFICER

Company Address: .....
.....
.....
Tel. ..... e-mail .....

PART 1- Watchkeeping Service

This is to certify that:
Name of Officer .....
Date of Birth .....
Discharge Book No. or other I.D. .....

Has served on the following vessel in the rank of .....

From (dates) ..... To (dates).....

Name of Vessel ..... O.N or I.M.O. No. .....

Type of Vessel ..... Gross Tonnage .....

Registered Power (kW) ..... Flag.....

Type / Make of main propelling machinery ....

Type / Make of Auxiliary Machinery..... .....

Type / Make of Boilers ....

During this period the above named officer accrued the following engine room watchkeeping/duty engineer UMS* service for not less than 8 hours out of every 24 hours whilst the vessel was engaged on sea going voyages. (*delete as appropriate)

Months.....Days .....

3. Regular work in ships having
   (a) centralised control room ..... ☐
   (b) full or partial automation ..... ☐
   (c) facility to operate machinery in the unmanned mode for a significant part of each 24 hour period. ☐

During the whole period stated above the officer was granted:

(a) no leave of absence*
(b) days leave of absence whilst on crew agreement (*delete as appropriate)

PART 2 – Testimonial

My report on the above named officer during the period stated is as follows:

	Satisfactory	Unsatisfactory
Conduct	☐	☐
Experience / Ability	☐	☐
Behaviour / Sobriety	☐	☐

Name of Chief Engineer Officer (block capitals) .....

Signature of Chief Engineer Officer .....

Issuing Authority, Certificate Number & STCW Grade of Chief Engineer Officer .....

.....

Ships / Company Stamp and Date

stamp

Signature of Engineer Superintendent .....

or

Signature of responsible representative of owners (e.g. Master) .....

Appendix 4

Statement of Shore Based Course Attendance

COMPANY NAME

SEA SERVICE TESTIMONIAL – ENGINEER OFFICER

Company Address: .....
.....
.....
Tel. ..... e-mail .....

I certify that the following is a full and true statement of the shore based training courses attended by ..... whilst in this company's employment.

Type of course	Course title and location	Rank of Officer and Certificate held at time of course	Dates		Course duration (days)	Approved Sea Service Remission (days)
			From	To		
General						
Instrumentation and control						
Welding						
Equipment Manufacturers						
Total remission						

Signature of fishing company representative .....

stamp

Date

Appendix 5

Recognized Countries as per chapter 9

1. United Kingdom (a certificate of competency for work aboard a fishing vessel issued by the United Kingdom prior to 1 July 2025, shall continue to be recognised until 1 July 2026). After this date a Certificate of Equivalent Competency must be held. UK CoC issued prior to 1 July 2025 will be recognised at the same level (i.e. UK Class 1 will equate to Irish Class 1, UK Class 2 will equate to Irish Class 2.
2. UK CoC issued after 1 July 2025 may be issued with CEC according to the table below and Marine Notice 41 of 2023.

3. EU Member states

Recognized countries assessed to determine the equivalent standards & conditions.

Certificate issued by recognized country	Irish Certificate of Equivalence	Conditions where applicable
United Kingdom Class 1 Engineer	Irish Class 2 Engineer	
United Kingdom Class 2 Engineer	Irish Class 3 Engineer	