The Further Education and Training Awards Council (FETAC) was set up as a statutory body on 11 June 2001 by the Minister for Education and Science. Under the Qualifications (Education & Training) Act, 1999, FETAC now has responsibility for making awards previously made by NCVA.

Module Descriptor

Fishing Gear Maintenance and Repair

Level 5  C20172

www.fetac.ie
1. Module Title  Fishing Gear Maintenance and Repair

2. Module Code  C20172

3. Level  5

4. Credit Value  1 credit

5. Purpose  This module is a statement of the standards to be achieved to gain a FETAC credit in Fishing Gear Maintenance and Repair at Level 5.

This module is designed to enable the learner to acquire the practical skills and knowledge to contribute to the routine operations of ropework, network and the use and maintenance of fishing gear including, trawls, seines, gillnets, traps and pots onboard the deck of a modern fishing vessel.

Course providers are responsible for designing learning programmes which are consistent with the learning outcomes and appropriate to the learners interests and needs.

6. Preferred Entry Level  Level 4 Certificate, Leaving Certificate or equivalent qualifications and/or relevant life and work experiences.

7. Special Requirements  None

8. General Aims

Learners who successfully complete this module will:

8.1 Be familiar with the types and characteristics of wires, ropes, chain, chandlery and cordage used by the industry.

8.2 Be familiar with various trawls, gillnets, pots, longlines and other fishing gear used by the industry.

8.3 Be familiar with the various types of trawl ground gears used by the industry.

8.4 Be familiar with the deck layout and general rigging of a modern fishing vessel.

8.5 Develop working practices onboard and ashore.

8.6 Acquire a range of practical skills in ropework, net maintenance and repair.
9. Units

*The module comprises two units*

Unit 1  Wires, Ropes, Chain, Chandlery and Cordage
Unit 2  Net Maintenance and Repair

10. Specific Learning Outcomes

Unit 1  Wires, Ropes, Chain, Chandlery and Cordage

*The learner should be able to: -*

10.1.1 Identify the different types of wires, ropes, combination wire ropes, chandlery, chain and cordage available to the fishing industry.

10.1.2 Coil and uncoil correctly, new and used wires and ropes.

10.1.3 Explain the effects of splicing on the different types of wires, ropes and combination wire ropes used in the fishing industry.

10.1.4 Differentiate between ‘breaking strain’ and ‘safe working load’.

10.1.5 Describe the effects of stretching, shock loads, surging and rendering on wires and ropes.

10.1.6 Seal rope ends using the following methods:

- heat and tape.
- whippings and servings

10.1.7 Form the most common knots, bends and hitches used in the fishing industry.

10.1.8 Describe the uses and potential misuses of the knots, bends and hitches outlined in 10.1.7

10.1.9 Demonstrate the correct maintenance and use of tools used for splicing wire and rope and opening chandlery.

10.1.10 Complete the following splices in 3-strand and 4-strand rope.

- Eye splice (soft).
- Eye splice (with thimble)
- Short splice.
- Long splice.
- Backsplice
- Cut splice.

10.1.11 Using the 3,2,1 locking splice, splice a soft eye and a solid eye (in a thimble) in six-strand wire.
10.1.12 Complete a cut-splice and short splice in:
  • wire up to 16mm diameter
  • combination wire rope up to 24mm diameter

10.1.13 Splice an eye in Octoplait rope.

10.1.14 Outline how to rig the following under supervision:
  • Trawl Doors
  • Landing and cargo derrick
  • Boom swingers
  • Rope and chain stoppers
  • Staging and pilot ladder
  • Bosun’s chair

Unit 2 Net Maintenance and Repair

The learner should be able to:

10.2.1 Differentiate between mobile and static fishing gear to include:
  • bottom trawls
  • seine nets
  • pelagic trawls
  • purse seines
  • gillnets
  • pots and traps

10.2.2 Identify the component parts of fishing gear described in 10.2.1:

10.2.3 Define the following terms:
  • normal and twine direction of netting
  • double and single twine
  • rows and meshes
  • points and bars
  • transversals and pick-ups
  • square meshes and fly meshes
  • Knot to knot and inside mesh measurement.

10.2.4 Count netting in depth and width.

10.2.5 Count the fishing circle of a trawl or seine net.

10.2.6 Manually braid netting with or without a gauge.

10.2.7 Identify and cut out the typical cutting rates used in net construction and repair.

10.2.8 Join sheets of netting by both side-knots and pick-ups.
10.2.9 Manually braid square meshes and fly meshes decreasing towards the wing end.

10.2.10 Demonstrate the use of the half mesh in cutting out and mending a tear.

10.2.11 Calculate loss in a tear for repair purposes.

10.2.12 Mend a tear in a net.

10.2.13 Join two sections of netting together of different mesh sizes.

10.2.14 Insert a section of netting to the correct dimensions.

10.2.15 Count the number of bars or fly meshes along the wings of a trawl.

10.2.16 Prepare the headline and footrope of a gillnet and trawl/seine for mounting the netting and wings respectively.

10.2.17 Mount gillnet sheets and trawl and seine wings onto their respective headlines and footropes.

10.2.18 Check and adjust trawls and seine nets for stretching of sheets.

10.2.19 Staple and stitch the selvages of a trawl or seine net.

10.2.20 Explain the construction of the following trawl and ground gears:
   - clean ground footropes
   - rubber disc footropes
   - rockhoppers and bobbins

10.2.21 Outline the use of bulldog/wire grips for the construction of temporary eyes in bridles and ground-gears.

10.2.22 Repair a trawl/seine cod-end and associated lifting gear.

10.2.23 Secure the cod-end by means of a gun, wedge or chain-knot.

10.2.24 Change a cod-end by means of the braiding or lacing method.

11 Portfolio of Assessment

Please refer to the glossary of assessment techniques and the note on assessment principles at the end of this module descriptor.

All assessment is carried out in accordance with FETAC regulations.

Assessment is devised by the internal assessor, with external moderation by FETAC.

Summary

<table>
<thead>
<tr>
<th>Skills Demonstration</th>
<th>60%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examination</td>
<td>20%</td>
</tr>
<tr>
<td>Learner Record</td>
<td>20%</td>
</tr>
</tbody>
</table>
11.1 Skills Demonstration

In one or more skills demonstrations, candidates will be assessed in each of the following skill areas. The skills assessed will be chosen at random by the internal assessor on the day of assessment. Candidates will respond to written or oral questioning on knowledge and understanding of the skills as part of the assessment.

1. Knots (any five of the following)
   - Clove or rolling hitch
   - Round turn and two half turns
   - Fisherman’s bend
   - Single or double carrick bend
   - Single or double sheet bend
   - Bowline or bowline on bight
   - Sheep shank or reef knot

2. Net Maintenance and Repair (any five of the following)
   - Braid netting with or without a gauge
   - Joining two sheets of netting by pickups
   - Braiding four bar meshes
   - Mending a tear in a net
   - Mounting part of a gillnet sheet onto a headline
   - Cutting out four typical cutting rates
   - Checking a trawl for stretching of sheets
   - Stitching the selvage of a trawl or seine net
   - Securing a cod-end by means of a knot

3. Splicing
   - Completing one of the following: Execute splice soft, cut splice or splice with thimble
   - Completing two of the following: Eye splice (soft), eye splice (with thimble), short splice, long splice, cut splice, back splice

11.2 Examination

The internal assessor will devise a theory-based examination that assesses candidates’ ability to recall and apply theory and understanding requiring responses to a number of short answer and structured questions. The questions may be answered in a variety of media such as in writing or orally.

The examination will be based on a range of specific learning outcomes and will be 1 hour in duration.

The format of the examination will be as follows:
12 short answer questions
Candidates are required to answer 10 (4 marks each)
11.3 Learner Record

A personal logbook will be compiled by candidates.

It will include a detailed summary of practical skill acquisition and activities in the workplace associated with ropework and netmending.

The logbook may be presented using a variety of media, including written, oral, graphic, audio, visual or any combination of these. Any audio or video evidence must be provided on tape.

12 Grading

Pass 50 - 64%
Merit 65 - 79%
Distinction 80 - 100%
Candidate Name: ______________________________  PPSN: ________________________
Centre: __________________________________________________  Centre No.: _________

<table>
<thead>
<tr>
<th>Assessment Criteria</th>
<th>Maximum Mark</th>
<th>Skill Area 1</th>
<th>Skill Area 2</th>
<th>Skill Area 3</th>
</tr>
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<tbody>
<tr>
<td>• Effective carrying out of tasks demonstrating mastery of tools and techniques</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Safe use and careful maintenance of tools and equipment</td>
<td>5</td>
<td></td>
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<tr>
<td>• Effective response to questioning demonstrating thorough knowledge and understanding of concepts in fishing gear maintenance and repair</td>
<td>5</td>
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<tr>
<td>Subtotal</td>
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**TOTAL MARKS**
*This mark should be transferred to the Module Results Summary Sheet*

60

Internal Assessor’s Signature: ______________________________  Date: __________

External Authenticator’s Signature: ______________________________  Date: __________
**Individual Candidate Marking Sheet 2**

**Fishing Gear Maintenance and Repair**  
C20172  
Examination (Theory-Based) 20%  
Learner Record 20%

Candidate Name: _______________________________  PPSN: ________________________  
Centre:  __________________________________________________ Centre No: _____________

<table>
<thead>
<tr>
<th>Assessment Criteria</th>
<th>Maximum Mark</th>
<th>Candidate Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Examination (Theory-Based)</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| 12 short answer questions, answer any 10 (40 marks each)  
(Indicate questions answered)       |              |                |
| Question No.:*                       | 2            |                |
|                                     | 2            |                |
|                                     | 2            |                |
|                                     | 2            |                |
|                                     | 2            |                |
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|                                     | 2            |                |
|                                     | 2            |                |
|                                     | 2            |                |
|                                     | 2            |                |
| Subtotal                             | 20           |                |
| **Learner Record**                   |              |                |
| • Detailed description of a wide range of ropework and net-mending skills and activities | 10           |                |
| • Considered evaluation of personal performance | 10           |                |
| Subtotal                             | 20           |                |
| **TOTAL MARKS**                      | 40           |                |

*The internal assessor is required to enter here the question numbers answered by the candidate.*

**Internal Assessor’s Signature:** ________________________________  **Date:** ______________

**External Authenticator’s Signature:** ________________________________  **Date:** ____________
<table>
<thead>
<tr>
<th>Candidate Surname</th>
<th>Candidate Forename</th>
<th>Mark Sheet 1</th>
<th>Mark Sheet 2</th>
<th>Total 100%</th>
<th>Grade*</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>60</td>
<td>40</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Signed: ___________________________  Date: ___________________

Internal Assessor: ___________________________  Date: ___________________

This sheet is for internal assessors to record the overall marks of individual candidates. It should be retained in the centre. The marks awarded should be transferred to the official FETAC Module Results Sheet issued to centres before the visit of the external Authenticator.

Grade*:
- D: 80 - 100%
- M: 65 - 79%
- P: 50 - 64%
- U: 0 - 49%
- W: candidates entered who did not present for assessment