



*SYLLABUS*

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## ***Maritime Literacy – A Preparatory VET Course***

### **The Educational Objective:**

To present and deliver a course where the student acquires a level of knowledge, skills and competences in order to understand the important basics of Boating, the important knowledge connected to it and the protection of the Maritime environment.

**Pre-Requisite:** Although this course is designed for students who are beginners to the maritime world it is assumed that the teachers have a level of knowledge and experience to explain, for example, the details of navigation and therefore be able to offer a variety of scenarios to explain the subject better to the learners.

## Introduction to the Course:

This 15 day course will teach 5 thematic maritime modules:

- Seamanship- 4 Days
- Communication 4 Days
- Navigation 4 days
- Safety 2 Days
- Ecology 1 Day

Pre Course Experience required: **None**

### A) Course Framework and Methodology:

The Course will be designed to deliver a level of learning to the students based on their beginner status. The content and each of their sub-topics are presented within the 5 modules using a matrix system that includes the course flow, lesson plans, and learning objectives.

The learning Objectives are given for the course contents and also the type of learning expected will be indicated. For example: Knowledge, Skill or Competence.

**Knowledge:** Which is outcome of the assimilation of information through learning. Knowledge is the body of facts, principles, theories and practices that is related to a field of work or study. -**What do you know?**

**Skill:** To have the ability to apply knowledge and use know-how to complete tasks and solve problems.- **What can you do?**

**Competence:** To demonstrate proven ability to use knowledge and skills in work or study situations and in professional and personal development.- **What can you do on demand/demonstrate?**

Each Module is divided into its sub-contents and given time allotted to each lesson in hours.

## B) Teaching methods

**B.1. Direct Instruction:** Direct instruction is the general term that refers to the traditional teaching strategy that relies on explicit teaching through lectures and teacher-led demonstrations. In this method of instruction, the teacher might play one or all of the following roles: Formal authority, expert and personal model.

**B.2. Experiential learning:** the process whereby knowledge is created through the transformation of experience. Knowledge results from the combinations of grasping and transforming the experience. The learning in this model includes multiple content areas so that students can see how problem-solving can happen in the real world--ideally, their own worlds.

**B.3. Flipped classroom learning approach:** Is a teaching structure that has students watching pre-recorded lessons at home and completing in-class assignments, as opposed to hearing lectures in class and doing homework at home. Teachers who implement the flipped classroom model often film their own instructional videos, but many also use pre-made videos from online sources. A key benefit of the flipped classroom model is that it allows for students to work at their own pace if that is how the teacher chooses to implement it. In some cases, teachers may assign the same videos to all students, while in others, teachers may choose to allow students to watch new videos as they master topics (taking on a more “differentiated” approach).

**B.4. Game based learning:** Game-based learning comes from the desire to engage students in more active learning in the classroom. External link. Because they require students to be problem solvers and use soft skills that they will need as adults, games are a great way to encourage a “mastery” mindset, rather than a focus on grades.

In a game-based learning environment, students work on quests to accomplish a specific goal (learning objective) by choosing actions and experimenting along the way. As students make certain progress or achievements, they can earn badges and experience points, just like they would in their favorite video games.

**B.5. Kinesthetic learning:** In a kinesthetic learning environment, students perform physical activities rather than listen to lectures or watch demonstrations. Hands-on experiences, drawing, role-play, building, and the use of drama and sports are all examples of kinesthetic classroom activities. Though a great way to keep students engaged and, at times, simply awake, very few classrooms employ kinesthetic learning activities exclusively. One reason is that, despite the popularity of learning style theories, there is a lack of researched-based evidence that shows that teaching to certain learning styles produces better academic results [External link](#). One upside is that kinesthetic learning is rarely based on technology, as the method values movement and creativity over technological skills. That means it's cheap and fairly low-barrier to adopt, as well as a welcome break from students' existing screen time. Kinesthetic learning can be more student-centered than teacher-centered when students are given the choice of how to use movement to learn new information or experience new skills, so it's also adaptable to a teacher's particular classroom preferences.

**B.6. Project-based learning:** Project Based Learning is a teaching method in which students gain knowledge and skills by working for an extended period of time to investigate and respond to an authentic, engaging, and complex question, problem, or challenge.

### C. Activities

Each activity is listed by a specific number in the course framework, i.e (1). This number is connected to the Teacher's Book, where each activity is explained in more detail, with its description, learning objectives, materials or equipment needed as well as instructions on delivering.

**D. Values and Attitudes:** Values are qualities that students should develop as principles underpinning conduct and decision-making, whereas attitudes support motivation and cognitive functioning. In the process of learning and teaching, values and attitudes mutually affect each other.

These values/attitudes should be taken into account and added to the “Assessment of achievement and Attitudes” column of all subjects and activities of this Syllabus, as both are personal qualities that students should develop in this course.

| Value/Attitude                | Actions which demonstrate students have -or have achieved- the value/attitude  |
|-------------------------------|--|
| <b>Autonomy</b>               | <ul style="list-style-type: none"> <li>• Can work autonomously</li> <li>• Can make decisions autonomously</li> </ul>   |
| <b>Collaboration/teamwork</b> | <ul style="list-style-type: none"> <li>• Help fellow students who are confronted with difficulties</li> </ul>  |
| <b>Commitment</b>             | <ul style="list-style-type: none"> <li>• Help arrange and put away equipment</li> <li>• Accept challenges</li> <li>• Make every effort to accomplish learning targets</li> </ul>                       |
| <b>Critical thinking</b>      | <ul style="list-style-type: none"> <li>• Tolerant, curious and proactive</li> <li>• Self confident</li> <li>• Comfort dealing with uncertainty</li> </ul>  |
| <b>Decision making</b>        | <ul style="list-style-type: none"> <li>• Identify problems</li> <li>• Make decisions or choices</li> </ul>   |
| <b>Participation in class</b> | <ul style="list-style-type: none"> <li>• Displays consistent positive attitude</li> <li>• Graciously accept feedback &amp; use constructively</li> <li>• Peer leader</li> </ul>                        |
| <b>Perseverance</b>           | <ul style="list-style-type: none"> <li>• Work hard to learn</li> <li>• Work hard to achieve targets</li> <li>• Insist on working hard in practice even in difficult circumstances</li> </ul>           |
| <b>Respect for others</b>     | <ul style="list-style-type: none"> <li>• Listen carefully to others' instructions</li> <li>• Respect and cooperate with team members.</li> <li>• Respect the performance of fellow students</li> </ul> |
| <b>Responsibility</b>         | <ul style="list-style-type: none"> <li>• Join all activities punctually</li> <li>• Put away equipment after training</li> <li>• Be responsible to self and the team</li> </ul>                         |

## Framework contents

|   |    |
|---|----|
| MODULE 1. SEAMANSHIP. Duration 20 hours (4 days x 5hrs).....  | 7  |
| 1.1. Curricular Objectives.....   | 7  |
| 1.2. Starting Point .....   | 7  |
| 1.3. Framework .....  | 8  |
| MODULE 2. COMMUNICATION ON WATER. Duration 20 hours (4 days x 5hrs) .....                           | 10 |
| 2.1. Curricular Objectives.....   | 11 |
| 2.2. Starting Point .....   | 11 |
| 2.3. Framework .....  | 12 |
| MODULE 3. NAVIGATION ON WATER. Duration 20 hours (4 days x 5hrs) .....                              | 13 |
| 3.1. Curricular Objectives.....   | 14 |
| 3.2. Starting Point .....   | 14 |
| 3.3. Framework .....  | 15 |
| MODULE 4. SAFETY ON WATER. Duration 10 hours (2 days x 5hrs).....                                   | 17 |
| 4.1. Curricular Objectives.....   | 17 |
| 4.2. Starting Point .....   | 17 |
| 4.2. Framework .....  | 18 |
| MODULE 5. ECOLOGY (SEAS, OCEANS, COASTS, AND INLAND WATERWAYS)- Duration 5 hrs (1 day x 5hrs) ..... | 19 |
| 5.1. Curricular Objectives.....   | 19 |
| 5.2. Starting Point .....   | 19 |
| 5.3. Framework .....  | 20 |

## MODULE 1. SEAMANSHIP. Duration 20 hours (4 days x 5hrs)

### 1.1. Curricular Objectives

- a) To provide some historical background of how sea-going vessels developed as a method of transport for various activities.
- b) To understand some of the Meteorological effects on the sea.
- c) To recognise the main activities carried out on the water and the various sectors engaged in those activities.
- d) To learn and be able to demonstrate a selection of Nautical Knots.
- e). To recognise different boat types, how are they maintained and propelled.

### 1.2. Starting Point

- a) **Module approach:** Teacher will explain which elements to be taught and therefore what the students are going to learn. At the outset of the Module the teacher will give a short introduction to the subject, its contents and sub-topics
- b) **Students current knowledge:** As part of the first steps into the course the teacher should test already the knowledge of their students by showing pictures of various sea going vessels or ships and ask the class to identify. i.e. war ship, fishing vessel, oil tanker sports boats etc,
- c) **Foreseeing of difficulties:** Students are completely new to the subject meaning that they might struggle with some of the content. Some students may have a low level of English language knowledge and digital Skills. For this reason, teachers should make use of the different methods and techniques listed and invest more time in those students who are lagging behind.

### 1.3. Framework

| Module               | Content                        | Subject/topics        | Method 1           | Activity 1   | Method 2              | Activity 2  | Type of Learning Knowledge / Skill / Competence | Learning Objectives:  | Assessment of achievement and attitude   | Material                                | Time (hrs) |  |
|----------------------|--------------------------------|-----------------------|--------------------|--|-----------------------|---|---|---|--|---|------------|--|
| <b>1. SEAMANSHIP</b> | <b>Day 1</b>                   |                       |                    |  |                       |   |   |   |  |   |            |  |
|                      | <b>A) History of Seafaring</b> | A.1.Exploration       | Direct Instruction | Lecture + Exercises of story of seafaring(1)                                       | Game based learning   | Online game to identify types of vessels to period of history. (2)                    | Knowledge Only                                  | LO: Understands the different stages of seafaring through the ages. How the different types of vessels developed. | Picture choice Questions and answers. Demonstrate back to teacher answers.   | Maps, Globe, Atlas and Reference books. | 2,5hrs     |  |
|                      |                                | A.2.Invasion          |                    |  |                       |   | Knowledge Only                                  |   |  |   |            |  |
|                      |                                | A.3.War               |                    |  |                       |   | Knowledge Only                                  |   |  |   |            |  |
|                      |                                | A.4.Trade             |                    |  |                       |   | Knowledge Only                                  |   |  |   |            |  |
|                      |                                | A.5.Pleasure          |                    |  |                       |   | Knowledge Only                                  |   |  |   |            |  |
|                      | <b>B) Reading the Sea</b>      | B.1.Beaufort scale    | Direct Instruction | A lecture + Basic meteorological forecasting and weather map reading activity. (3) | Experiential learning | Visit, going to the coast, to experience the effects on the sea state by the wind (4) | Knowledge Only                                  | LO: Understands the importance of weather, particularly the wind and its effects regarding seafaring.             | Tested on Beaufort Scale and weather terminology. An assessment test to determine knowledge and attitude regarding the effects and dangers of the weather. | Reference books.Videos. Test Papers     | 2,5 hrs    |  |
|                      |                                | B.2.Wind              |                    |  |                       |   | Knowledge & Skill                               | LO: knows Beaufort scale and effects of wind on water.  |  |   |            |  |
|                      |                                | B.3.Storm             |                    |  |                       |   | Knowledge & Skill                               | LO: Can describe wind differences, wind directions. Understand the effects and dangers of storms.                 |  |   |            |  |
|                      |                                | B.4.Waves             |                    |  |                       |   | Knowledge & Skill                               | LO: Can describe basic wave types heights.  |  |   |            |  |
|                      |                                | B.5. Weather forecast |                    |  |                       |   | Knowledge & Skill                               | LO: Knows where to obtain Weather forecast. Understands reading map and low pressure and high pressure            |  |   |            |  |



| Module               | Content   | Subject/topics      | Method 1                            | Activity 1  | Method 2            | Activity 2  | Type of Learning<br>Knowledge / Skill / Competence | Learning Objectives:   | Assessment of achievement and attitude  | Material   | Time (hrs) |
|----------------------|---|---------------------|-------------------------------------|---|---------------------|---|--|--|---|--|------------|
| <b>1. SEAMANSHIP</b> | <b>Day 2</b>                                      |                     |                                     |   |                     |   |  |  |   |  |            |
|                      | <b>C) Sectors and activities related to water</b> | C.1.Trade,          | Direct Instruction                  | Powerpoint presentation to show examples of different types of ships. (5) | Game based learning | Simulator game to determine rules regulations and relationships between these 4 categories or demonstrate best sectors. (6) | Knowledge Only                                     | LO: Understands the different types of vessels and their relationships and priority to each other. | Can recognise when tested the different activities from images of vessels.  | Online videos                                    | 2,5 hrs    |
|                      |   | C.2.Military,       |                                     |   |                     |   |  |  |   | Reference books.                                 |            |
|                      |   | C.3.Fishing Vessels |                                     |   |                     |   |  |  |   | Simulator and games.                             |            |
|                      |   | C.4. Pleasure       |                                     |   |                     |   |  |  |   |  |            |
|                      | <b>D) Knots</b>                                   | D.1. Bowline        | Flipped classroom learning approach | Prepare a presentation to teach the other teams. One team per knot. (7)   | -                   | -   | Knowledge / Skill & Competence                     | LO: Know the names. Can tie four different knots for which use                                     | Can demonstrate any of the 4 knots in any situation blindfolded. Written test to show which knot for which purpose. | Ropes of different diameter, texture and length. | 2,5 hrs    |
|                      |   | D.2. Reef           |                                     |   |                     |   |  |  |   |  |            |
|                      |   | D.3. Clove Hitch    |                                     |   |                     |   |  |  |   |  |            |
|                      |   | D.4. Stopper        |                                     |   |                     |   |  |  |   |  |            |

| Module                        | Content                                      | Subject/topics                          | Method 1   | Activity 1   | Method 2  | Activity 2  | Type of Learning<br>Knowledge / Skill / Competence | Learning Objectives:  | Assessment of achievement and attitude   | Material         | Time (hrs) |  |
|-------------------------------|--|---|--|--|---|---|--|---|--|------------------|------------|--|
| <b>1. SEAMANSHIP</b>          | <b>E) Types of boats and vessels</b>         | E.1.Sail                                | A combination of direct instruction and experiential learning. | online group research to identify different examples of each boat category (8)           | A combination of direct instruction and experiential learning | Visit the local port/marina to identify different examples of each category (9) | Knowledge Only                                     | LO: Understand the official categories.   | Game of pictures, tricks to catch out students to recognise precisely categorization | Computers Videos | 2hrs       |  |
|                               |  | E.2.Power Driven                        |  |  |   |   | Knowledge Only                                     | LO: Can name the various items on a ship  |  |                  |            |  |
|                               |  | E.3. Terminology-boat parts             |  |  |   |   | Knowledge Only                                     |   |  |                  |            |  |
|                               | <b>F) Maintenance of boats and Vessels</b>   | F.1. Basic Engine Checks                | Experiential learning  | Visit to a shipyard repair business to see how it is done (10)                           | Game based learning   | Finalise the game structure and content (11)                                    | Knowledge Only                                     | LO: Understanding of general boat maintenance.  | Test on basic maintenance procedures.  | Notepads/pens    | 3 hrs      |  |
|                               |  | F.2. Anti-fouling                       |  |  |   |   | Knowledge Only                                     | C: Can perform control on the fuel system, electricity, cooling and lubricating oil system on boat engine |  |                  |            |  |
|                               |  | F.3. General Repairs                    |  |  |   |   | Knowledge Only                                     | C:Can master good seamanship in connection with maintenance / inspection of a boat                        |  |                  |            |  |
|                               | <b>Day 4</b>                                 |   |  |  |   |   |  |   |  |                  |            |  |
|                               | <b>G) Understanding of engines and sails</b> | G.1. Principles of power driven vessels | Project based learning.  | Research Project to determine type and principles of both power and sailing vessels (12) | -   | -   | Knowledge Only                                     | LO: Understand different types of power and sailing vessels, advantages and disadvantages                 | Test to recognise the type of vessel: sail or power                                  | Notepads/pens    | 5hrs       |  |
|                               |  | G.2. types of power driven vessels.     |  |  |   |   | Knowledge Only                                     |   |  |                  |            |  |
|                               |  | G.3. Principles of sailing vessels.     |  |  |   |   | Knowledge Only                                     |   |  |                  |            |  |
| G.4. Types of sailing vessels |  | Knowledge Only                          |  |  |   |   |  |   |  |                  |            |  |

## MODULE 2. COMMUNICATION ON WATER. Duration 20 hours (4 days x 5hrs)

### 2.1. Curricular Objectives

- a) To understand the basics of marine VHF radio and know what to do, what to say and what not to say? And most important, how to call for help?.
- b) To learn the various signs, lights, sound signals and flags used on water to communicate to other vessels.
- c). To experience first hand at a local port or coastal site the signals learned.

### 2.2. Starting Point

- a) **Module approach:** The students will learn how to communicate by using marine VHF radio online simulators. They will furthermore be able to identify and recognise different signs, lights, sound signals and flags that are used on water to communicate to other vessels. The teaching methods used for this module will be a combination of traditional teaching in class, hands-on approach, and experimental training group through a visit to a local port or coastal area the knowledge gained in class. In this visit students will be asked to collect litter found on the beach or proofs of any kind of action that is not environmentally friendly.
- b) **Students current knowledge:** This module will start on day 5, meaning that students will have already acquired basic knowledge of Seamanship and can be introduced into more complex and practical lessons.
- c) **Foreseeing of difficulties:** Some difficulties may arise while teaching this module. Online simulators will be used to motivate students with practical lessons. Some of these students may not be used to use digital tools, meaning that teacher will have to save time to explain the use of these tools (how to use them and take care of the tool). Furthermore, it is very important to plan the study visit in order to keep them engaged in the subject they are learning and therefore avoid possible distractions.

## 2.3. Framework

| Module                    | Content                            | Subject/topics  | Method 1           | Activity 1                                  | Method 2             | Activity 2   | Type of Learning                                       |   | Learning Objectives                               | Assessment of achievement and attitude   | Material | Time (hrs) |
|---------------------------|------------------------------------|---|--------------------|---|----------------------|--|--|---|---|--|----------|------------|
|                           |                                    |   |                    |   |                      |  | Knowledge / Skill / Competence                         |   |   |  |          |            |
| 2. Communication on water | Day 5                              |   |                    |   |                      |  |  |   |   |  |          |            |
|                           | A) Introduction to radio etiquette | A.1. Basics of the VHF Radio                          | Direct Instruction | Lecture + Exercises of radio etiquette (13) | Kinesthetic learning | Online games<br>Online simulators<br>Dummy simulators (14) | Knowledge & Skill                                      | LO: understands basic protocol to receive and transmit radio messages and can describe how a VHF radio works, including making a DSC call | Test of the phonetic alphabet and procedure words | Printed learning material and Dummy Sets | 3 hrs    |            |
|                           |                                    | A.2. Phonetic Alphabet                                |                    |   |                      |  | Knowledge & Skill                                      |   |   |  |          |            |
|                           |                                    | A.3. Dos and Don'ts                                   |                    |   |                      |  | Knowledge & Skill                                      |   |   |  |          |            |
|                           |                                    | A.4. Procedural words                                 |                    |   |                      |  | Knowledge & Skill                                      |   |   |  |          |            |
|                           |                                    | A.5. Emergency distress call                          |                    |   |                      |  | Knowledge & Skill                                      |   |   |  |          |            |
|                           | B) Morse Code                      | B.1 Discontinued method of communication (except SOS) | Direct Instruction | Lecture + Exercises of Morse code (15)      | Kinesthetic learning | Online Morse code simulator (16)                           | Knowledge Only   | LO: Understands its importance in history   | Understands SOS                                   | Teaching materials handouts              | 2 hrs    |            |
|                           |                                    | B.2. The history of Morse Code                        |                    |   |                      |  | Knowledge & skill                                      |   |   |  |          |            |
|                           | Day 6                              |   |                    |   |                      |  |  |   |   |  |          |            |
|                           | C) Signs                           | C.1. Bouyage  | Direct Instruction | Lecture of signs, sounds and flags. (17)    | Game based learning  | An activity with flipp cards and online simulator (18)     | Knowledge Only   | LO: understands the significance and meaning of the signs   | Test of visual multichoice questions.             | Powerpoint, Video and reference books    | 5hrs     |            |
| C.2. Day shapes           |                                    | Knowledge Only  |                    |   |                      |  |  |   |   |  |          |            |
| D) Sounds flags           | D.1. Sound signals                 | Knowledge and skill                                   |                    |   |                      |  | LO: understands the meaning of sound signals and flags | Test of audio and visual scenarios.   | Quiz, game, audios.                               |  |          |            |
|                           | D.2. Signaling flags               | Knowledge Only  |                    |   |                      |  |  |   |   |  |          |            |

## 2.3.Framework

| Module                        | Content   | Subject/topics                  | Method 1  | Activity 1   | Method 2            | Activity 2   | Type of Learning<br>Knowledge / Skill / Competence       | Learning Objectives  | Assessment of achievement and attitude   | Material        | Time (hrs) |
|-------------------------------|---|---------------------------------|---|--|---------------------|--|--|--|--|-----------------|------------|
| 2. Communication on water     | Day 7   |                                 |   |  |                     |  |  |  |  |                 |            |
|                               | E) Lights   | E.1. Navigation lights on ships | Direct Instruction  | Lecture and classroom activities and exercises about lights (19) | Game based learning | An activity with flip cards, online simulators and online activities. (20) | Knowledge & skill  | LO: Understands the significance and meaning of navigation lights for various types of vessels | Test multichoice visual (night scenario) | Simulator, book | 5 hrs      |
|                               |   | E.2. Lights and lighthouses     |   |  |                     |  | Knowledge & skill  |  |  |                 |            |
|                               | Day 8   |                                 |   |  |                     |  |  |  |  |                 |            |
| F) Visit to Ports and marinas | F.1. Observe 1st hand all of the above in this module | Experiential Learning           | Visit to a local port, marina, or lighthouse for recognition and comparison in a real sense. (21) | -  | -                   | Knowledge & Skill  | LO: able to recognise various marks, flags, lights, etc. | Better understanding of how ships communicate to each other on the water                       | Notepads, photos, videos, handouts       | 5hrs            |            |

## MODULE 3. NAVIGATION ON WATER. Duration 20 hours (4 days x 5hrs)

### 3.1. Curricular Objectives

- a) To understand the subject in general terms and to teach the basics of Navigation.
- b) Learn how to use the tools of Navigation
- c) Learn to read the nautical Chart and plan a simple passage.
- d) How to avoid a collision at sea-Basic rules: who gives way to who?

### 3.2. Starting Point

**a). Module approach:** A short introduction to offer the definition of Navigation will be given. As this module requires a higher practical approach, three days will be dedicated to theory and traditional teaching while two full days will be hands-on, promoting the collaboratively working and mutual learning cooperation. Students will learn how to use the tools of Navigation, read nautical charts, plan a simple passage and to understand the rules to avoid collisions at sea.

**b) Students current knowledge:** Students will be familiarised with the maritime sector, after completing 8 days of study, practical lessons, and study visits. Students will be ready to make use of more complex tools such as compasses, and plan simple passages.

**c). Foreseeing of difficulties:** Tools such as the Plotter, dividers and compasses will be introduced to students. Some of these tool will be completely new to students and will require time investment to explain them at different levels. As on module 2, special attention should be given to the use of digital tools (simulators).

### 3.3. Framework

| Module                               | Content                                     | Subject/topics                          | Method 1  | Activity 1   | Method 2           | Activity 2   | Type of Learning Knowledge / Skill / Competence | Learning Objectives   | Assessment of achievement and attitude               | Material  | Time (hrs) |  |
|--------------------------------------|---|---|---|--|--------------------|--|---|---|--|---|------------|--|
| 3. Navigation on water               | Day 9                                       |   |   |  |                    |  |   |   |  |   |            |  |
|                                      | A) Introduction to navigation               | A.1. Tidal waters                       | Direct Instruction  | Lecture and classroom activities and exercises about navigation (22)                                 | Direct Instruction | Videos of tidal rise and fall and tidal stream effects. (23) | Knowledge only                                  | LO: understands the fundamental differences of navigating in tidal or non-tidal waters. | Understands the effects and dangers of tidal waters. | Reference books   | 1 h        |  |
|                                      |   | A.2. Non-tidal waters                   |   |  |                    |  | Knowledge only                                  |   |  |   |            |  |
|                                      | B) The chart                                | B.1. Chart information                  | Direct Instruction  | Lecture and classroom activities and exercises about the chart (24)                                  | -                  | -  | Knowledge only                                  | LO: understand chart scale features and colour coding.                                  | Understands the steps for planning a passage         | Nautical chart, plotter, dividers, pencils, notepads, calculator, compass | 4 hrs      |  |
|                                      |   | B.2. Position of Latitude and longitude |   |  |                    |  | Knowledge only                                  | LO: Can use the plotter, can use the dividers, can use the compass                      |  |   |            |  |
|                                      |   | B.3. Distance                           |   |  |                    |  | Knowledge only                                  | LO: Have knowledge of lake demarcations   |  |   |            |  |
|                                      |   | B.4. Compass Bearing                    |   |  |                    |  | Knowledge only                                  | LO: Know how to read a chart  |  |   |            |  |
|                                      |   | B.5. Passage planning                   |   |  |                    |  | Knowledge only                                  |   |  |   |            |  |
|                                      | Day 10                                      |   |   |  |                    |  |   |   |  |   |            |  |
|                                      | C) The chart work/passage planning practice | C.1. Plotting the course                | A combination of Kinesthetic learning and project-based learning. | Divide the class into different groups and give each group a different passage plan to complete (25) | -                  | -  | K,S & C.  | LO: Can plan a passage  | They can present the passage plan to the class.      | Nautical chart, plotter, dividers, pencils, notepads, calculator, compass | 5hrs       |  |
|                                      |   | C.2. Determine distance of the course   |   |  |                    |  | K,S & C.  |   |  |   |            |  |
|                                      |   | C.3. The bearing of the course          |   |  |                    |  | K,S & C.  |   |  |   |            |  |
| C.4. Distance, time, speed triangle. |   | K,S & C.                                |   |  |                    |  |   |   |  |   |            |  |
| C.5. Position by Dead reckoning      |   | K,S & C.                                |   |  |                    |  |   |   |  |   |            |  |

| Module                            | Content                          | Subject/topics                   | Method 1                            | Activity 1   | Method 2 | Activity 2 | Type of Learning<br>Knowledge / Skill / Competence       | Learning Objectives   | Assessment of achievement and attitude | Material                                   | Time (hrs) |
|-----------------------------------|----------------------------------|----------------------------------|-------------------------------------|--|----------|------------|--|---|--|--|------------|
| 3. Navigation on water            | Day 11                           |                                  |                                     |  |          |            |  |   |  |  |            |
|                                   | D) Collision regulations         | D.1. Introduction to regulations | Flipped classroom learning approach | Student project to learn and also teach specific collision regulations. (26) | -        | -          | Knowledge Only   | LO: understand which vessel gives way in different collision scenarios. | Test of visual multichoice questions.  | Online simulator, book reference material. | 5 hrs      |
|                                   |                                  | D.2. Examples of collisions      |                                     |  |          |            |  |   |  |  |            |
|                                   |                                  | D.3. Giveaway rules              |                                     |  |          |            |  |   |  |  |            |
|                                   |                                  | D.4. Local rules                 |                                     |  |          |            |  |   |  |  |            |
| Day 12                            |                                  |                                  |                                     |  |          |            |  |   |  |  |            |
| E) Collision regulations practice | E.1. Understanding the simulator | Game based learning              | Simulator training/practice(27)     | -  | -        | K,S & C.   | LO: More realistic understanding of collision avoidance. | The results are given inmediately through the simulator                 | Simulator                              | 5hrs                                       |            |



## MODULE 4. SAFETY ON WATER. Duration 10 hours (2 days x 5hrs)

### 4.1. Curricular Objectives

- a) to understand the importance of the need to have knowledge of and use essential safety equipment
- b) to understands what to do in specific emergency situations
- c) to have knowledge of basic first aid
- d) to explain treatment options for most common medical emergency

### 4.2. Starting Point

- a) **Module approach:** As the contents of this module requires learning by doing, a combination of hands-on approach, experimental training group and peer activities will be used. It is also planned a visit to local sea safety centre/sea rescue service to get a specialist professional teaching. Students will understand the importance of the need to have knowledge of and to use essential safety equipment and what to do in specific emergency situations.
- b) **Students current knowledge:** After receiving 12 days of training in the maritime subject, students will have knowledge of Seamanship, Communication and Navigation on water, meaning that they will have learned the basics on how to navigate and communicate with other vessels or land and therefore can take the next step of learning what to do in emergency situations.
- c) **Foreseeing of difficulties:** This is a subject that involves the treatment or assistance to a person suffering from either a minor or serious illness or injury. It is important to remark the importance of this module and to act with responsibility.

## 4.2. Framework

| Module             | Content                          | Subject/topics         | Method 1           | Activity 1  | Method 2              | Activity 2  | Type of Learning Knowledge / Skill / Competence | Learning Objectives  | Assessment of achievement and attitude                                | Material         | Time (hrs) |
|--------------------|----------------------------------|------------------------|--------------------|---|-----------------------|---|---|--|---|------------------|------------|
| 4. Safety on water | Day 13                           |                        |                    |   |                       |   |   |  |   |                  |            |
|                    | A) Understanding safety on water | A.1. Safety equipment  | Direct Instruction | Introduction Lecture, Slide presentations, and online videos. (28)                      | Kinesthetic learning  | Practical demonstration and testing among students of various essential safety equipment (30) | Knowledge, Skill & Competence                   | LO: to understand the importance of the need to have knowledge of and use essential safety equipment | Multichoice test of what equipment to use in which situation.         | Safety equipment | 5hrs       |
|                    |                                  | A.2. Safety rules      |                    |   |                       |   |   | LO: Explain basic hypothermia, frostbite and undercooling  |   |                  |            |
|                    |                                  | A.3. Medical First Aid |                    |   |                       |   |   | LO: Explain treatment options  |   |                  |            |
|                    | Day 14                           |                        |                    |   |                       |   |   |  |   |                  |            |
|                    | B) Emergency situations          | B.1. Man over board    | Direct Instruction | explaining of videos of examples to deal with the situations & slide presentations (31) | Experiential learning | Visit to local pool to experience sea survival and rescue training. (32)                      | Knowledge, Skill & Competence                   | LO: understands and is able to take part in specific emergency situations procedures.                | Multichoice test of what equipment to use in which emergency scenario | Safety equipment | 5hrs       |
|                    |                                  | B.2. Fire on board     |                    |   |                       |   |   |  |   |                  |            |
|                    |                                  | B.3. Sinking           |                    |   |                       |   |   |  |   |                  |            |
|                    |                                  | B.4. Run aground       |                    |   |                       |   |   |  |   |                  |            |

## MODULE 5. ECOLOGY (SEAS, OCEANS, COASTS, AND INLAND WATERWAYS)- Duration 5 hrs (1 day x 5hrs)

### 5.1. Curricular Objectives

- a) To have knowledge of the importance of the coastal environmental
- b) To be aware of the serious impact of the effects of pollution to the marine environment.

### 5.2. Starting Point

- a) **Module approach:** to better understand the coastal environment, it is necessary to explain through videos and other interactive tools the serious impact of the effects of pollution to the marine environment globally. Students will build a Campaign to include other schools in the area regarding a beach clean/ protected area based on a research project. A prize will be offered for the best research project
- b) **Students current knowledge:** This is the last day of the Maritime Literacy course, and students will have gained knowledge in the most common maritime activities, including navigation, communication, and emergency situations. In this last day of the course, the students will learn how the maritime activity can damage the environment and how to act with responsibility towards it.
- c) **Foreseeing of difficulties:** No difficulties are envisaged for this module.

### 5.3. Framework

| Module     | Content  | Subject/topics  | Method 1           | Activity 1  | Method 2               | Activity 2  | Type of Learning<br>Knowledge / Skill<br>/ Competence | Learning<br>Objectives  | Assessment<br>of<br>achievement<br>and attitude | Material                                     | Time (hrs) |
|------------|--|---|--------------------|---|------------------------|---|---|---|---|--|------------|
| Day 15     |  |   |                    |   |                        |   |   |   |   |  |            |
| 5. ECOLOGY | <b>Ecological environment related to water and the effects on the environments</b> | Dangerous chemicals onboard<br>Organic waste<br>Litter<br>Noise<br>Boating activity/anchoring<br>Sealife<br>Seaweed<br>Pollution<br>Plastic pollution | Direct Instruction | An introduction to the subject and the importance of the huge impact this has at this time (33) | Project-based learning | Build a Campaign to include other schools in the area regarding a beach clean/protected area based on a research project (34) | Knowledge, skills & Competences                       | LO: to be aware of the importance of the coastal environmental and how to protect it.<br><br>LO: To be aware of the serious impact of the effects of pollution to the marine environment. | to deliver the campaign                         | reference books, internet research, QR Codes | 5hrs       |