

## **Course “Navigation on smaller inland waterways” Curriculum | Operational level:**

The course will offer several competencies to the students and advantages to the community by spreading awareness about the importance and use of smaller inland waterways in terms of environmental benefits, cost and time efficiency. Moreover, students will become capable of navigating in the smaller inland waterways efficiently.

Navigation is a broad topic and involves many skills. Therefore, the skills that students will learn from the other courses involved in this program will be useful for this training course as well. Such as: operation of the craft and communications.

The offerings of “smaller inland waterway navigation” training course will be different from the other courses taught in this program. Therefore, it is essential to mention that the training course is not a replacement of any other courses of the academic program, but it will upgrade students’ efficiency and will make them ready to deal with the difficult situations that might happen during sailing.

The objective of this course is to make the students capable of learning the competencies of how to navigate and work on inland waterways efficiently. Mainly, CP learning outcomes in Danube Skills. i.e. Candidate is able to moor the vessel under normal circumstances. The measurables are based on standard competencies of navigation on operational level.

### The measurable learning outcomes are as following:

The boatman shall be able to assist the management of the craft in situations of manoeuvring and handling a craft on inland waterways. The boatman shall be able to do so, on all types of waterways and all types of ports.

### Detailed Course Description:

Small inland waterway navigation will be a 5 day training course. The course carries a total of >26 hours. Four days of training with a total 24 contact hours, which is consist of 12 hours of theory and 12 hours of practical training. 6.5 hours of examination, which will be consist of 45 minutes of practical exam (simulator) per student and 1.5 hours of theoretical exam (Multiple choice questions). Duration of practical is exam depends on the number of students (group size).

The topics that will be covered during this training program are mainly based on the standards of Operational level competencies. For making it more concrete below is the timeline based course description.

**Day.1 (Monday):**

<b>Time-slot</b>	<b>Topics</b>	<b>Learning outcome</b>
Morning session 09:00 – 12:00	Knowledge of Mooring, Unmooring, hauling, anchoring operations, equipment material and procedures used for coupling operations.	The boatman shall be able to <ul style="list-style-type: none"> <li>- Assist with mooring, unmooring and hauling (towage) operations; and</li> <li>- Assist with coupling operations of push barge combinations and shall be able to assist with anchoring operations.</li> </ul>
Lunch Break 12:00 – 13:00		
Afternoon Session 13:00 – 16:30	Knowledge of functions and types of various propulsion and steering systems, the influence of wind and current on sailing and manoeuvring; and knowledge of navigation aids and instruments.	The boatman shall be able to: <ul style="list-style-type: none"> <li>- steer the craft complying with helm orders, using steering gear properly and taking the influence of wind and current into account;</li> <li>- use navigational aids and instruments under supervision.</li> </ul>

**Day.2 (Tuesday) total 6 hours:**

<b>Time-slot</b>	<b>Topics</b>	<b>Learning outcomes</b>
Morning session 09:00 – 12:00	Knowledge of safety regulations and checklists to following dangerous and emergency situations, characteristics of main European IWW, ports and terminals and knowledge of general provisions.	The boatman shall be to: <ul style="list-style-type: none"> <li>- Undertake necessary actions for safety of navigation.</li> <li>- To describe the characteristics of main European inland waterways, ports and terminals for voyage preparation and steering; and</li> <li>- To respect general provisions, signals, signs and marking system.</li> </ul>
Lunch Break 12:00 – 13:00		

Afternoon Session 13:00 – 16:30	Knowledge of the shape, layout and facilities of locks and bridges, various traffic control systems.	The boatman shall be able of following the procedures while passing locks and bridges, and able to use systems of traffic control.
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**Day.3 (Wednesday):**

Time-slot	Topics	Learning outcomes
Morning session 09:00 – 12:00	Simulator	Application of theory in practice and of the sailing skills
Lunch Break 12:00 – 13:00		
Afternoon Session 13:00 – 16:30	Simulator	Application of theory in practice and of the sailing skills

**Day.4 (Thursday):**

Time-slot	Topics	Learning outcomes
Morning session 09:00 – 12:00	Simulator	Application of theory in practice and upgrading of the sailing skills
Lunch Break 12:00 – 13:00		
Afternoon Session 13:00 – 16:30	Simulator	Application of theory in practice and upgrading of the sailing skills

**Day.5(Friday):**

Time-slot	Activity
45 minutes each candidate	Practical exam (Simulator)
2 Lesson hours* 45 minutes (1.5 hours)	Theoretical exam (Multiple choice)

Duration of the practical exam is flexible/ Variable and it depends on the group size/number of the students. During the training course there will be a number of group and individual assessments that each student will be involved in.

Course required resources will be consist of Fully equipped classes with an e-learning. In case of need students will get handouts as well. Simulator center, laboratory equipment's and required training materials will be provided to the students for the practical work.