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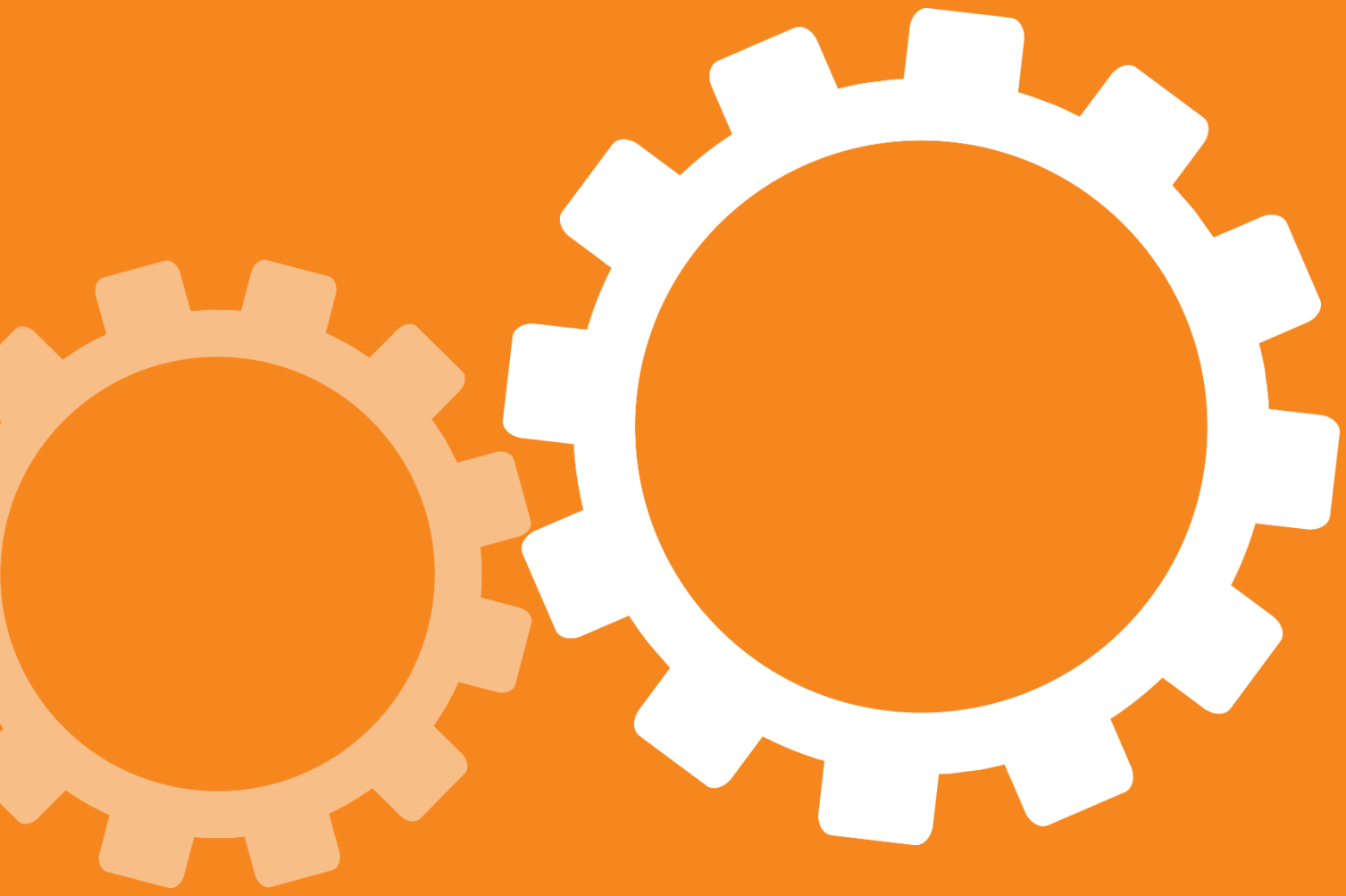
Maritime Alliance for fostering the European Blue Economy through a Marine Technology Skilling Strategy

Co-funded by the Erasmus+ Programme of the European Union

Green Move

Learning Outcomes

May 2022



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Course Title	Green Move
Course Types	Variety of student & trainer exchanges and technical visits
Entry Level	Open to teachers and students of VET centres, experts on the specific topics with which the mobility activity was concerned .
Level and Relevant Framework	EQF 3-8
Delivery Method	Online and in-person

Collective Learning Outcomes groupings	
Applicable Knowledge & Skills	1. **Understand** the environmental impact of Shipbuilding (SB) and Offshore Renewable Energies (ORE). 2. **Develop Transversal skills** through mobility actions. 3. **Identify techniques and technologies** to reduce the environmental impact of SB and ORE. 4. **Define recommendations** for blended mobilities in green technologies for SB and ORE both for education centres and companies.

Mobility events/activities	
1.	**Educational visits to Basque Maritime Factory (Albaloa) & Gijón**
Promoter & Beneficiary	**CIFP Ferrolterra**
1.Learning Outcome groups	**Wooden boat construction, rebuilding, recycling techniques, environmental standards, resource materials used, position of women as carpentry staff**
Knowledge & Skills groups	1. **Learn and evaluate techniques and methodologies** in construction, rebuilding, refurbishment and recycling of sustainable wooden boats. 2. **Learn different techniques** of manufacturing, ecological construction materials and its use in the maritime industry of traditional and modern boats. 3. **Learn** about the role of women in carpentry projects in other centres. 4. **Apply** the UNE-EN ISO 14001 environmental standard to carpentry studies.
2.	**Educational visit to Navantia Fene facilities**
Promoter & Beneficiary	CIFP Someso
2.Learning Outcome groups	**Future prospects for offshore wind energy, manufacturing processes related to offshore structures**
Knowledge & Skills	1. **Verify** the promising prospects for offshore wind energy. 2. **Learn** about the organization processes related to offshore structures manufacturing.

3.	**Conference on Ecopainting, Bilbao, June 2019**
Promoter & Beneficiary	CIFP Someso
3.Learning Outcomes	Ecologically efficient paint methods, new techniques and tools
Knowledge & Skills	1. **Learn** about more ecological and efficient ways to paint. 2. **Acquire necessary tools** to transfer new sophisticated technologies to the students of the VET centres
4.	**Automation and Robotics Workshop, Vigo, May 2021**
Promoter & Beneficiary	CIFP Someso
4.Learning Outcome groups	New automated ship-building technologies, industrial robotics
Knowledge & Skills	1. **Learn about robotic applications** to efficient and intelligent ship building techniques. 2. **Acquire innovative tools** to transfer new technologies to the students of the VET centres. 3. **Catch-up** with the latest developments in automation, industrial and service robotics **in the framework of the Industry 4.0**
5.	**Educational visits to HUSUM Wind fair & the Delta Plan in Holland**
Promoter & Beneficiary	CIFP Ferrolterra
5.Learning Outcome groups	Latest technology in offshore wind farms, turbines, biogas, effects of ocean currents and storms, drone inspections, floods control
Knowledge & Skills	1. **Learn and find** solutions to specific technological difficulties. 2. **Know** the latest technological developments on offshore wind energy maintenance resources and operations. 3. **Compare** the different turbines used in offshore wind farms 4. **Visit** a wind farm. 5. **Visit** a biogas plant and **learn** about its operation 6. **Understand** ocean currents, their power and how human beings coexist with the sea and benefit from it. 7. **Learn** about the effects of storms on offshore wind farm installations. 8. **Discover new techniques on inspection aids**, such as the use of drones. 9. **Understand** flood prevention mechanisms.
6.	**Conference on "Generation and Sustainability" with the Commerce Confederation of A Coruña**
Promoter & Beneficiary	CIFP Someso
6.Learning Outcome groups	**Use of solar energy technology, all aspects of offshore wind energy, green technologies in maritime industries**
Knowledge & Skills	1. **Use** a paradigm shifter in order to avoid fossil fuel consumption through strengthening awareness about green technologies used in industry, paying special attention to the maritime industry. 2. **Learn** the basis for a sustainable offshore wind energy generation, from the equipment maintenance and the electric motors until the energy storage and electric batteries. 3. **Find out** about solar energy and panel installation.

7.	**Hybrid seminar on Shipbuilding: innovation and sustainability**
Promoter & Beneficiary	CIFP Someso
7.Learning Outcomes	Innovative shipbuilding technologies, including sustainability issues
Knowledge & Skills	**1.Learn** about the new challenges and approaches taken in the shipbuilding industry regarding innovation **2.Strengthen** awareness of importance of sustainability in the maritime industry.
8.	**Educational visit to Offshore wind production facilities and education centres in France**
Promoter & Beneficiary	CIFP Someso
8.Learning Outcomes	UTE's facilities and logistics of production processes
Knowledge & Skills	Visit Navantia-Windar's production facilities in order to 1. **Understand and analyse** the production processes used by the UTE (Temporary Union of Companies). 2. **Collect** information on the distribution and location of the workshops. 3. **Find out about** the transport logistics of the production. 4. **Learn about how** the UTE's production centres are coordinated between themselves.
9.	**Workshop on digitalisation and BIM (Building Information Modelling)**
Promoter & Beneficiary	CIFP Universidade Laboral
9.Learning Outcome groups	Familiarization with full details of BIM, data processing, modelling, circular economy
Knowledge & Skills	1. **Train** trainers in BIM, a tool that use different digitization techniques, to obtain point clouds, and photogrammetric models. 2. **Develop** the necessary skills to handle digitization equipment. 3. **Provide** data processing capabilities such as photogrammetric and point cloud models. 4. **Provide** the basis for modelling infrastructures/facilities' current state and obtaining digital twins. 5. **Acquire** knowledge content such as how to generate zero waste as part of the reforms of industrial facilities. 6. **Develop** the concept of the circular economy applied to the AEC sectors in activities related to the reform of ORE and industrial facilities. 7. **Develop** collaborative work in BIM processes. 8. **Achieve** the Learning Results established in the title of Specialization Course in Building Information Modelling.

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