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Skills

High LEVEL and market-respondent Competences for a Blue and Digitalized "Smart and skilled South Adriatic"

Deliverable D.3.2.1 – Identification of the contents of the CB HE learning modules

Sustainable.Development.of.the.Yachting.and.Cruise.Industry

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Abbreviations

Abbreviation	Full Term
ABGC	Adriatic Blue Growth Cluster
AI	Artificial Intelligence
ARPA	Automatic Radar Plotting Aid
BETC	Blue Economy Training Center
CB	Cross-Border
COLREG	International Regulations for Preventing Collisions at Sea
CPD	Continuous Professional Development
ECDIS	Electronic Chart Display and Information System
ECTS	European Credit Transfer and Accumulation System
EQF	European Qualifications Framework
EU	European Union
ICS	International Chamber of Shipping
IMBK	Institute of Marine Biology, University of Montenegro
IMO	International Maritime Organization
IoT	Internet of Things
ISPS Code	International Ship and Port Facility Security Code
LMS	Learning Management System
MARPOL	International Convention for the Prevention of Pollution from Ships
NQF	National Qualifications Framework
PPT	PowerPoint Presentation
RADAR	Radio Detection and Ranging
SA SKILLS	High LEVEL and market-respondent Competences for a Blue and Digitalized "Smart and skilled South Adriatic"
SMEs	Small and Medium-sized Enterprises
SOLAS	International Convention for the Safety of Life at Sea
TM	Thematic Module
VLE	Virtual Learning Environment

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Executive summary

This document presents the curriculum and implementation framework for the lifelong learning programme **"Sustainable Development of the Yachting and Cruise Industry"**, developed within the SA SKILLS project – *High LEVEL and market-respondent Competences for a Blue and Digitalized Smart and Skilled South Adriatic*. The programme represents a cross-border higher education learning initiative aimed at strengthening advanced competencies for sustainable maritime tourism and Blue Economy development in the South Adriatic region.

The programme is jointly implemented by the Faculty of Maritime Studies Kotor and the Institute of Marine Biology, University of Montenegro, with institutional cooperation from the Port of Kotor and Porto Montenegro Marina. It is delivered as an international summer school in English language and has received official accreditation by the Agency for Quality Assurance in Higher Education of Montenegro. The curriculum is aligned with Level VI of the Montenegrin National Qualifications Framework and the European Qualifications Framework (EQF), ensuring comparability and recognition within the broader European education area.

The programme directly contributes to the strategic objectives of the SA SKILLS project by supporting:

- development of innovative Blue Economy skills,
- sustainable maritime tourism capacities,
- digital transformation of maritime services,
- environmental sustainability,
- and cross-border cooperation between Montenegro, Albania, and Italy.

The curriculum is structured around seven thematic modules covering sustainable nautical and cruise tourism, marina and cruise port management, maritime safety and security, infrastructure development, navigational technologies, smart and digital maritime systems, and green marina concepts. The programme combines theoretical lectures, practical exercises, simulator-based training, field visits, and laboratory activities, ensuring strong integration between academic knowledge and operational practice. Particular emphasis is placed on experiential learning through activities at the Blue Economy Training Center (BETC), Wärtsilä navigational simulators, Porto Montenegro Marina, the Port of Kotor, and laboratories of the Institute of Marine Biology.

The learning methodology is competency-based and market-oriented, responding to identified needs within marinas, cruise ports, maritime administration, tourism management, and marine environmental protection sectors. Participants develop both technical and transversal competencies related to sustainable maritime development, smart maritime technologies, environmental management, and digital transformation. The programme additionally promotes

interdisciplinarity, internationalisation, and collaboration among students, professionals, researchers, and Blue Economy stakeholders from across the South Adriatic region.

The programme targets university students, young professionals, employees in maritime and tourism sectors, public administration representatives, researchers, and practitioners interested in sustainable maritime development. To ensure balanced regional participation, a structured selection methodology and minimum quota system have been introduced for participants from Puglia, Molise, Albania, and Montenegro.

The programme follows an intensive short-term summer school model with a total workload of 90 hours, including theoretical teaching, practical and field activities, and independent participant work. Upon successful completion, participants receive 3 ECTS credits and a certificate of completion.

By integrating sustainability principles, smart maritime technologies, competency-based learning, and practical exposure to real operational environments, the programme contributes to the creation of a new generation of maritime professionals capable of supporting the long-term resilience, competitiveness, and sustainable development of the South Adriatic Blue Economy ecosystem.

1 Sustainable Development of the Yachting and Cruise Industry

1.1 Introduction: The Bridge to Professionalism

The transition from a student's academic curiosity to a high-level maritime professional requires a bridge built on both rigorous theory and technical application. Within the Bay of Kotor, the "Sustainable Development of the Yachting and Cruise Industry" program—a flagship initiative of the SA SKILLS project—serves as this critical link. Aligned with Level VI of the National Qualifications Framework and the European Qualifications Framework (EQF), this curriculum is designed to transform the abstract concepts of the Blue Economy into a set of market-respondent competences.

"The core mission of this program is to bolster the availability of skilled labor in the South Adriatic region's blue economy sectors, empowering the workforce and fostering economic growth through sustainable maritime development and innovation."

For the learner, this journey is not merely about observation; it is about achieving the professional standard required to manage the complex interplay between tourism, logistics, and ecology. By synthesizing the objectives of the Montenegro, Albania, and Italy cross-border cooperation, the program ensures that every participant graduates not just "informed," but ready to lead in a digitalized maritime sector.

This path to professional mastery begins with a deep dive into the intellectual foundations of the industry at the Blue Economy Training Center.

1.2 Programme

1.2.1 About the programme

The programme *Sustainable Development of the Yachting and Cruise Industry* is an interdisciplinary lifelong learning programme organised as an international summer school in English language.

The programme is implemented jointly by:

- the Faculty of Maritime Studies Kotor,
- the Institute of Marine Biology, University of Montenegro,

with institutional cooperation from:

- Port of Kotor,
- Porto Montenegro Marina.

The programme is developed within the framework of the SA SKILLS project: **"High LEVEL and market-respondent Competences for a Blue and Digitalized Smart and Skilled South Adriatic"**, co-financed through the Interreg IPA South Adriatic Programme 2021–2027.

The programme has received official accreditation by the Agency for Quality Assurance in Higher Education of Montenegro.

1.2.2 Programme Context

The programme contributes directly to:

- Blue Economy development in the South Adriatic region,
- regional cooperation between Montenegro, Albania, and Italy,
- strengthening sustainable maritime tourism capacities,
- development of innovative Blue Economy skills.

The programme is implemented under the SA SKILLS project and supports the long-term objectives of:

- cross-border cooperation,
- sustainable tourism,
- digital transformation,
- smart maritime development,
- environmental sustainability.

1.2.3 Programme Objectives

The programme aims to:

- strengthen competencies related to sustainable Blue Economy development;
- improve knowledge in yachting and cruise tourism management;
- develop practical skills for modern marina and cruise port operations;
- introduce participants to smart and digital port technologies;
- promote sustainable and environmentally responsible maritime development;
- support international cooperation and mobility within the South Adriatic region.

1.2.4 Learning outcomes

The curriculum is designed based on market needs in **marinas, cruise ports, and maritime agencies**. Participants will gain knowledge and skills in:

1. **Trends in nautical and cruising tourism**.
2. **Modern management and marketing methods for marinas and cruise ports**.
3. **Navigation techniques for yachts and cruise ships**.

4. **Infrastructure development for marinas and cruise ports**.
5. **Safety and security measures in maritime tourism**.
6. **Environmental impact assessment and pollution management**.

1.3 Participants

1.3.1 Target group

The programme is intended for:

- university students,
- young professionals,
- employees in maritime and tourism sectors,
- public administration representatives,
- marina and cruise port professionals,
- Blue Economy stakeholders,
- researchers and practitioners interested in sustainable maritime development.

1.3.2 Admission Requirements

Applicants must meet one of the following conditions:

- active university student status; OR
- completed minimum four-year secondary education.

Additionally:

- knowledge of English language is mandatory;
- participants should have access to a laptop/computer and internet connection.

1.4 Participant Selection

In the event that the number of eligible applications exceeds the maximum capacity of 40 participants, the following prioritisation and selection rules shall apply.

1.4.1 General Principles

The selection process shall be based on:

- transparency,
- equal treatment,
- regional balance,
- relevance to programme objectives,
- contribution to the Blue Economy ecosystem of the South Adriatic region.

Selection shall aim to ensure:

- balanced representation of SKILLS partner regions,
- interdisciplinarity,
- participation of both students and professionals,
- internationalisation of the learning environment.

1.4.2 Regional Minimum Quota

To ensure balanced cross-border participation in line with the objectives of the SKILLS project, the minimum regional representation which shall be guaranteed is presented on Table 1:

Table 1.Regional Minimum Quota

SKILLS Region	Minimum Number of Participants
Puglia (Italy)	5
Molise (Italy)	5
Albania	5
Montenegro	5

Total guaranteed minimum: **20 participants**

If a region does not provide a sufficient number of eligible applicants, the unused places may be redistributed among applicants from other regions according to the ranking criteria defined below.

1.4.3 Eligibility Screening

Only applicants fulfilling the formal admission requirements shall enter the ranking process:

- active student status OR completed at least four-year secondary education;
- demonstrated knowledge of English language;
- complete application submitted within the deadline.

Incomplete applications shall not be considered.

1.4.4 Prioritisation Criteria

Eligible applicants shall be ranked according to the criteria presented in Table 2:

Table 2. 1.4.4 Prioritisation Criteria

Criterion	Maximum Points
Relevance of educational/professional background to Blue Economy sectors	25
Motivation letter and demonstrated interest in sustainable yachting/cruise development	20

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Criterion	Maximum Points
Potential for application of acquired knowledge in professional or academic environment	20
Participation from underrepresented institution/sector/region	10
Previous participation in SKILLS-related activities or Blue Economy initiatives	10
Gender balance contribution (where applicable)	5
Early application submission	5
Participation of young professionals/students (<35 years)	5

Maximum total: **100 points**

1.4.5 Priority Profiles

In case of equal ranking scores, priority shall be given in the following order:

1. Applicants from underrepresented SKILLS regions;
2. Applicants directly involved in:
    - maritime transport,
    - marina management,
    - cruise tourism,
    - port administration,
    - marine environmental protection,
    - Blue Economy SMEs;
3. Students and young professionals;
4. Female applicants in sectors with traditionally lower female representation;
5. Applicants from partner institutions of the SKILLS project.

1.4.6 Balance Between Students and Professionals

The selection committee should aim for a balanced cohort structure:

- approximately 40–60% students,
- approximately 40–60% professionals/practitioners.

This balance may be adjusted depending on overall application quality and regional representation needs.

1.4.7 Waiting List

Applicants meeting eligibility conditions but not initially selected due to capacity limits shall be placed on a reserve list according to final ranking.

If selected participants withdraw before programme commencement, places shall be offered to reserve candidates while respecting:

- regional balance,
- overall cohort diversity,
- programme objectives.

1.4.8 Selection Committee

The final selection shall be conducted by a Selection Committee appointed by:

- Faculty of Maritime Studies Kotor,
- Institute of Marine Biology,
- programme management team.

The Committee shall:

- verify eligibility,
- apply scoring criteria,
- ensure regional quotas,
- prepare the final participant list.

1.4.9 Transparency and Documentation

The selection process shall be documented through:

- evaluation sheets,
- scoring records,
- signed selection minutes.

All applicants shall be informed of:

- selection outcome,
- reserve-list status (if applicable),
- next procedural steps.

1.4.10 Flexibility Clause

The Selection Committee reserves the right to slightly adjust participant distribution in justified cases in order to:

- preserve programme quality,
- ensure interdisciplinarity,
- maximise regional cooperation impact,

- support strategic objectives of the SKILLS project.

1.5 Programme Structure

1.5.1 Thematic modules

The programme consists of seven thematic modules:

1. Sustainable Development of Nautical and Cruise Tourism
2. Modern Management of Marinas and Cruise Ports
3. Safety and Security in Marinas and Cruise Ports
4. Planning and Development of Marina and Cruise Port Infrastructure
5. Assessment of Key Navigation Parameters
6. Smart and Digital Marinas and Cruise Ports
7. Green Marinas and Cruise Ports

The programme curriculum is presented in

1.5.2 Learning Format

The programme combines:

- theoretical lectures,
- practical exercises,
- simulator demonstrations,
- field visits,
- laboratory activities,
- online learning materials.

Practical activities include:

- visits to Porto Montenegro Marina,
- visits to the Port of Kotor,
- navigation simulator exercises,
- laboratory work at the Institute of Marine Biology.

Teaching is conducted entirely in English.

1.5.3 Programme Duration

- Total workload: **90 hours**
- Teaching structure:
  - 20 hours theoretical teaching
  - 20 hours field/practical teaching
  - 50 hours independent participant work
- Duration:
  - intensive short-term format (summer school model)

1.5.4 ECTS Credits & Certification

Participants who successfully complete the programme receive:

- **3 ECTS credits**
- Certificate of completion

The programme is aligned with:

- Level VI of the Montenegrin National Qualifications Framework,
- European Qualifications Framework (EQF).

1.6 Participation Fees

Participation is free of charge for selected participants, as costs are covered through the Interreg IPA South Adriatic Programme, project SA SKILLS.

1.7 Programme venues

1.7.1 The Launchpad: Theoretical Mastery at the BETC

The Blue Economy Training Center (BETC) serves as the primary site for the program's theoretical delivery. Before students engage with high-tech equipment, they must understand the management frameworks that govern the South Adriatic. The curriculum focuses on shifting the paradigm from uncoordinated coastal exploitation to integrated, sustainable maritime management. Lectures at the BETC cover everything from international legal frameworks (such as the MARPOL and Barcelona Conventions) to the socio-economic influences of global tourism.

The program's methodology is specifically designed to address existing industry gaps through applied theory, as presented in Table 3:

Table 3. The program's methodology

Industry Gaps / Traditional Approach	Applied Theory (BETC Methodology)
Uncoordinated coastal tourism planning.	Integrated Blue Economy management strategies.
Fragmented marketing and service delivery.	Case study analysis of Porto Montenegro and Port of Kotor.
Generic business management principles.	Specific nautical and cruise tourism management (TM2).
Passive academic observation.	Interactive discussions and pre-test readiness assessments.

Once the mind is prepared with these strategic foundations, the learner moves to a high-tech virtual environment to apply theoretical knowledge to navigational reality.

1.7.2 Navigating the Digital Seas: The Wärtsilä Nautical Simulator

At the Faculty of Maritime Studies, the narrative moves from the lecture hall to the bridge. Under the guidance of seasoned practitioners, including Captain Ivan Mraković and Captain Igor Petrović, students engage with **"TM5: Assessment of Main Navigational Parameters."** Utilizing world-class Wärtsilä nautical simulators, learners master RADAR/ARPA and ECDIS (Electronic Chart Display and Information System) in a risk-free environment that replicates the unique challenges of the Bay of Kotor.

The 3 Most Important Benefits of Simulator Training:

1. **Operational Safety:** Practitioners test maneuvers and emergency responses without real-world risk to vessels or the marine environment.
2. **Regulatory Proficiency:** Real-time application of COLREG (International Regulations for Preventing Collisions at Sea) and SOLAS standards ensures compliance is instinctive.
3. **Sustainability-Driven Navigation:** Using digital charts for route planning allows for optimized vessel performance, directly contributing to emission reduction and fuel efficiency.

Transitional Sentence: Transitioning from the virtual bridge, students then enter the operational heart of the region's most significant maritime hubs.

1.7.3 Real-World Exposure: Port of Kotor and Porto Montenegro Marina

Field visits are essential for visualizing the scale of the maritime industry. Students compare the logistical demands of a high-volume cruise port with the luxury management of a premier marina. These sessions provide direct exposure to the infrastructure and the security protocols mandated by the International Ship and Port Security (ISPS) Code.

- **Port of Kotor (Cruise Case Study):**
    - **Massive Liner Logistics:** Analyzing the arrival/departure protocols and logistical support required for large-scale cruise ships.
    - **Port Security:** Observing the practical implementation of the ISPS Code and risk management in a public-facing port environment.

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- **Porto Montenegro Marina (Yachting Case Study):**
  - **Marina Management:** Insights into high-end customer experience and the business of managing premier berths.
  - **Innovative Marketing:** Understanding how digital platforms and branding are used to attract global nautical tourism.
  - **Sustainable Infrastructure:** Observing "Blue Flag" operations and green port standards in action.

Transitional Sentence: While the ports demonstrate surface-level operations, the next phase of training explores the scientific monitoring required to sustain the water itself.

This comprehensive exposure—from digital bridges to biological labs—culminates in a professional profile ready for the modern market.

1.7.4 Under the Microscope: Laboratory Work at the Institute of Marine Biology

The practical narrative distinguishes between innovative agrotourism and scientific analysis. Early in the week, students participate in an excursion to shellfish farms and olive oil production sites to see innovative local offerings for tourists (TM1). However, the technical climax occurs on Friday at the Institute of Marine Biology (IMBK) Mariculture Lab, where the "Green Marina" concept (TM7) is subjected to scientific scrutiny.

Field and Laboratory Monitoring Activities:

- **Biological Monitoring:** Analyzing marine water and biota samples collected from port vicinities to assess biodiversity health.
- **Pollution Analysis:** Identifying sources of sea and coastal pollution and suggesting circular economy interventions.
- **Ecological Compatibility:** Evaluating the health of marine ecosystems as a prerequisite for Blue Economy development.

1.8 What Participants Will Gain

Participants will:

- understand current trends in nautical and cruise tourism;
- gain practical insights into marina and cruise port management;
- develop knowledge of sustainable maritime development;

- improve digital and environmental competencies;
- engage with regional Blue Economy stakeholders;
- strengthen international professional networks.

1.9 Important Information

Participants are expected to:

- actively attend lectures and field activities;
- participate in practical exercises and discussions;
- complete pre-test and final assessment;
- respect programme schedule and organisational rules.

2 Logistic Information

2.1 Programme Organizers

- **Faculty of Maritime Studies Kotor**
  University of Montenegro, Put I Bokeljske brigade 44, 85330 Kotor, Montenegro
- **Blue Economy Training Center (BETC)**
  Institute of Marine Biology, University of Montenegro, Put I Bokeljske brigade 68, 85330 Kotor, Montenegro

2.2 Accommodation

For selected students the accommodation will be provided in local apartments.

3 Synthesis: The Making of a Modern Maritime Professional

The SA SKILLS learning narrative is defined by an intensive short-term "summer school" model. This 90-hour commitment is split into 20 hours of theory, 20 hours of practical/field teaching, and 50 hours of independent work. Upon completion, participants earn 3 ECTS credits and a professional certification that acknowledges their readiness to manage the digital and ecological demands of the South Adriatic.

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Table 4. Learner's Growth Summary

Facility / Experience	Thematic Module (TM)	Professional Competency Gained
BETC Lectures	TM1, TM2, TM3, TM4, TM6	Sustainable management, marketing, and ISPS security protocols.
Wärtsilä Simulators	TM5	Operational navigation and digital chart (ECDIS) mastery.
Port & Marina Visits	TM2, TM3, TM4	Practical infrastructure planning and logistical management.
IMBK Laboratories	TM7	Environmental monitoring and circular economy application.

The ultimate takeaway is a professional who possesses "market-respondent competences"—a leader who is prepared to ensure the South Adriatic's Blue Economy remains both technologically advanced and environmentally resilient.

Annex 1: Sustainable Development of the Yachting and Cruise Industry Programme Curriculum

Thematic modules

No.	Thematic module
1	Sustainable development nautical and cruising tourism
2	Contemporary management marinas and cruising ports
3	Security and security in marinas and cruising ports
4	Planning and development infrastructure marina and cruising port
5	Assessment main navigational parameters
6	Smart and digital marinas and cruising ports
7	Green marinas and cruising ports

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TM1: Sustainable Development Nautical and Cruising Tourism

Topics

1. Introduction in nautical and cruising tourism.
2. Global characteristics offers and demand in nautical and cruising tourism.
3. The connection between coastal and maritime tourism. Coastal and maritime tourism in the context of blue economy.
4. Practical exercise: Excursion to shellfish/fish farms and/or olive oil production in the Bay of Kotor as an example of an innovative local tourist offer for nautical and cruising tourists.

Learning Outcomes

1. Analyze socio-economic influence maritime tourism in within global sustainable frameworks.
2. Develop strategies for mitigation problems excessive tourism using examples from practice.
3. To design tourist experiences coordinated with cultural values and ecological restrictions.

Teaching methodology

1. PowerPoint presentations lecturer
2. Study case
3. Discussion
4. Practical exercises: visit to localities of cultural heritage and agrotourism

Lecturers

1. Prof. Ilija Moric
2. Dr. Tena Božović
3. Dr. Aleksandar Joksimović
4. Dr. Milica Mandić

Literature

1. Prof. Ilija Moric: PPT
2. Dr. Tena Božović: PPT
3. Dr. Aleksandar Joksimović: PPT
4. Dr. Milica Mandić: practical work on field with orally by presentation

Topics

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TM2: Contemporary Management Marinas and Cruising Ports

Topics:

1. Effective marina management and innovative marketing strategies. Operations, sustainability, customer experience and modern marketing tools such as digital platforms, branding and stakeholder engagement. Case study: Marina Porto Montenegro.
2. Efficient management cruising ports and innovative marketing strategies. Operations, sustainability, user experience and modern marketing tools. Case study: Port of Kotor.
3. Practical exercise: Visit Marina Porto Montenegro.
4. Practical exercise: Visit to the cruising port of Kotor.

Learning Outcomes

1. Analyze strategies management marinas and cruising ports.
2. Analyze marina operations and port through the prism of sustainability and user experiences.

Teaching methodology

1. PowerPoint presentations lecturer
2. Study case
3. Practical exercises: visits marina and cruising port
4. Discussion

Lecturers

1. Dr. Tena Božoviž
2. Dr. Zoran Kovačević

Literature:

1. Dr. Tena Bozovic: PPT
2. Dr. Zoran Kovacevic: PPT

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TM3: Security and Security in Marinas and Cruising Ports

Topics:

1. Introduction to aspects of safety and security in marinas and ports. International ship and port security code (ISPS code), security protocols, procedures and responsibilities.
2. Security threats, equipment, security and risk management plans in marinas and ports.
3. Study case: Smart security systems port on Mediterranean.

Outcomes learning:

1. Recognize difference between concepts "security" and "security".
2. Describe key international regulations in areas safety and maritime safety traffic.
3. Describe measures preventive actions which is apply in ports and marinas.
4. Recognize threats by security in ports and marinas.
5. Successfully conduct risk assessment in ports and marinas.

Teaching methodology

1. PowerPoint presentations lecturer
2. Study case
3. Discussion

Lecturers:

1. Prof. Dr. Špiro Ivošević
2. Assoc. Prof. Dr. Miroslav Vukičević
3. Mr. Ivan Mraković, captain +

Literature:

1. Witherby Publishing Group, BIMCO and International Chamber of Shipping (ICS). (2019). Cyber Security Workbook for On Board Ship Use.
2. Nautical Institutes. (2012). Maritime Security: A Practical Guide.
3. Spiro Ivošević: PPT
4. Miroslav Vukičević: PPT
5. Ivan Mraković: PPT

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TM4: Planning and Development Infrastructure Marina and Cruising Port

Topics:

1. Development infrastructure and service to cruising ports.
2. Infrastructure development and service in marinas.
3. Types ships and their significant characteristics for access marinas and ports.
4. Logistical support for the arrival and departure of yachts and cruisers.

Learning Outcomes

1. Identify and classify services and infrastructure in cruising ports.
2. Identify and classify services and infrastructure in marinas.
3. Describe the types of ships and their significant characteristics when approaching marinas and ports.

Teaching methodology

1. PowerPoint presentations lecturer
2. Study case
3. Discussion

Lecturers:

1. Dr. Maja Škurić
2. Dr. Zoran Kovačevic
3. Dr. Tena Božović

Literature:

1. Dr. Maja Škurić: PPT 1.
2. Dr. Zoran Kovacevic: PPT
3. Dr. Tena Božović: PPT
4. Gibson, P. & Parkman, R. (2019). Cruise Operations Management.
5. Dowling, R. & Weeden, C. (2017). Cruise Ship Tourism.
6. Stefanidaki, E. & Lekakou, M. (2013). Cruise Carrying Capacity.
7. PND Engineers, Inc. (2015). Cruise Ship Facilities Planning.
8. Wilson, AMW, Mugerauer, R., & Klinger, T. (2015). Rethinking Marine Infrastructure Policy.

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TM5: Assessment Main Navigational Parameters

Topics:

1. Introduction in security maritime navigation.
2. SOLAS, COLREG and national regulations about security navigation in The Bay of Kotor .
3. Basic navigational equipment.
4. Application RADAR/ARPA system for improvement security navigation.
5. Usage RADAR/ARPA for determination positions ship and avoidance collision at sea.
6. Application ECDIS system for promotion security navigation.
7. Application of ECDIS system for route planning and navigation supervision.

Learning Outcomes

1. Apply smart tools for navigation for promotion operational security and efficiency.
2. Interpret digital navigation charts (ECDIS) for route planning and emission reduction.
3. Analyze navigational risks and propose mitigation strategies .
4. Understand international conventions on security maritime traffic.

Teaching methodology

1. PowerPoint presentations lecturer/expert
2. Demonstration exercises on Wärtsilä simulators with RADAR/ARPA with equipment
3. Demonstration exercises on Wärtsilä simulators with ECDIS with equipment
4. Study case
5. Discussion

Lecturers:

1. Mr. Ivan Mraković, captain
2. Mr. Igor Petrović, captain

Literature:

1. IMO (2003) COLREG 1972.
2. IMO (2020) SOLAS 2020.
3. Stanovčić, I., & Mraković, I. (2020). Rules posture navigational guards on the ship.
4. Witherby Publishing Group (2019) Passage Planning Guidelines.

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TM6: Smart and Digital Marinas and Cruising Ports

Topics:

1. Smart technologies in marinas and ports (IoT, AI demand prediction, digital twins).
2. Digitalization and integration new technology in maritime operations.
3. Digital platforms for design user experiences.
4. Cyber security in smart marinas and ports.
5. Digital twins and smart control boards for marinas and ports.
6. Application AI and remote observations in protect marine ecosystem.
7. Blockchain in Maritime Logistics and Tracking.

Learning Outcomes

1. Recognize and to estimate risks cyber safety in port operations.
2. Apply digital tools for planning tourist experiences.
3. Apply IoT and remote sensing technologies to protect the marine ecosystem.
4. Evaluate tools for collection and processing data about life middle.
5. Identify key information technologies in nautical tourism.
6. Define new technologies in maritime operations and monitoring ecosystem.
7. Understand principles sustainable management marine ecosystems.
8. Understand the importance of the health of marine ecosystems for the development of the blue economy.

Teaching methodology

1. PowerPoint presentations lecturer
2. Study case
3. Discussion

Lecturers:

1. Prof. Dr. Vesna Popović Bugarian
2. Prof. Dr. Nikola Žarić
3. Dr. Maja Škurić
4. Mr. Miodrag Zarubica
5. Mr. John MrakoviĆ
6. Mr. Nikola Đorđević

Literature:

1. PPT presentations all lecturer.

Skills

TM7: Green Marinas and Cruising Ports

Topics:

2. Introduction in pollution sea and coast.
3. EU and IMO frame for protection marine life environment (MARPOL, Barcelona Convention, EU directives).
4. Protected marine areas (conditions for development nautical and cruising tourism).
5. Influence yachts and cruisers on pollution sea and coast.
6. Decarbonization and energy efficiency in sector cruises and marina.
7. Circular economy in the operation of marinas and ports (waste management, water recycling, sustainable materials).
8. Green certificates and standards for marinas and ports (Blue Flag, ISO 14001, EcoPort).
9. Practical exercise: Monitoring quality air in proximity port.
10. Practical exercise: Monitoring quality marine water and biota in ports.

Learning Outcomes

1. Recognize main sources and types pollution sea and coast.
2. Interpret and apply international and regional legal frames protection must.
3. Evaluate compatibility tourism with ecological requirements protected areas.
4. Evaluate influence yacht operation and cruiser on biodiversity and industries coast.
5. Suggest strategies for decarbonization and energy efficiency.
6. Apply principles circular economy.
7. Recognize importance green certificate for sustainably management.
8. Collect and analyze data on air and water quality.

Teaching methodology

1. Visual presentations
2. Study case
3. Practical exercises
4. Discussion

Lecturers:

1. Prof. Dr. Danilo Nikolić
2. Dr. Milica Mandić
3. Dr. Vesna Mačić
4. Dr. Slavica Petović
5. Dr. Ana Pešić
6. Dr. Dragana Drakulović
7. Dr. Aleksandra Huter

8. Dr. Sandra Jokanović
9. Mr. Radmila Gagić

Literature:

1. PPT presentations all lecturers

Programme

Day	Time	Thematic Unit/Area	Lecture room
Monday, June 29th 2026	08:00 - 08:30	Registration of atendees	
	08:30 - 09:00	Official opening ceremony	BETC Lecture room
	09:00 - 10:00	Pre-test for atendees	
	10:00 - 10:15	Break	
	10:15 - 11:00	TM1	BETC Lecture room
	11:00 - 11:45		
	11:45 - 14:00	Lunch break	
	14:00 - 14:45	TM1	BETC Lecture room
	14:45 - 15:30		
	15:30 - 15:45	Break	
	15:45 - 16:30	Excursion to shellfish/fish farms and/or olive oil production	
	16:30 - 17:00		
Tuesday, June 30th 2026	08:30 - 09:15	TM2	BETC Lecture room
	09:15 - 10:00		
	10:00 - 10:15	Break	
	10:15 - 11:00	TM3	BETC Lecture room
	11:00 - 11:45		
	11:45 - 14:00	Lunch break	
	14:00 - 14:45	Visit Marina Porto Montenegro	
	14:45 - 15:30		
	15:30 - 15:45		
	15:45 - 16:30		
	16:30 - 17:00		
Wednesday, July 1st 2026	08:30 - 09:15	TM4	BETC Lecture room
	09:15 - 10:00		
	10:00 - 10:15	Break	
	10:15 - 11:00	TM4	BETC Lecture room
	11:00 - 11:45		
	11:45 - 14:00	Lunch break	
	14:00 - 14:45	Visit to the cruising port of Kotor	
	14:45 - 15:30		
	15:30 - 15:45		
	15:45 - 16:30		
	16:30 - 17:00		

Skills

Thursday, July 2nd 2026	08:30 - 09:15	TM5	Faculty of Maritime Studies Nautical simulator
	09:15 - 10:00		
	10:00 - 10:15	Break	
	10:15 - 11:00	TM5	Faculty of Maritime Studies Nautical simulator
	11:00 - 11:45		
	11:45 - 14:00	Lunch break	
	14:00 - 14:45	TM6	BETC Lecture room
	14:45 - 15:30		
	15:30 - 15:45	Break	
	15:45 - 16:30	TM6	BETC Lecture room
	16:30 - 17:00		
Friday, July 3rd 2026	08:30 - 09:15	TM7	BETC Lecture room
	09:15 - 10:00		
	10:00 - 10:15	Break	
	10:15 - 11:00	TM7	BETC Lecture room
	11:00 - 11:45		
	11:45 - 14:00	Lunch break	
	14:00 - 14:45	Visit to Institute of Marine Biology laboratories	
	14:45 - 15:30		
	15:30 - 15:45	Break	
	15:45 - 16:30	Visit to the Institute of Marine Biology laboratories	
	16:30 - 17:00		
Saturday, July 4th 2026	08:30 - 09:15	Post/test for attendees	BETC Lecture room
	09:15 - 10:00		
	10:00 - 10:15	Break/Lunch break	
	10:15 - 11:00		
	11:00 - 11:45		
	11:45 - 14:00		
	14:00 - 14:45	Presentation of the results of pre-post and post-test comparison, discussion, conclusion Certificate ceremony	BETC Lecture room
	14:45 - 15:30		
	15:30 - 15:45		
	15:45 - 16:30		
	16:30 - 17:00		

Skills

Project Partners

- University of Montenegro - Institute of Marine Biology, Lead partner
- Department of Labour Market Policies, Education, Training, Puglia Region, Italy
- Service for the competitiveness of productive systems, Molise Region, Italy
- State Agency for Strategic Programming and Aid Coordination, Albania
- Ministry of Economic Development of Montenegro
- Ministry of Agriculture and Rural Development, Albania

Duration:
01/07/2023 – 31/10/2027

Total Budget:
4.799.677,09 €

EU Funding:
3.983.815,88 €

About the Project:
The SKILLS project, spanning from July 2023 to October 2027, aims to bolster the availability of skilled labor in the South Adriatic region's blue economy sectors. With a total budget of 4.799.677,09 €, including significant EU funding of 3.983.815,88 €, the project operates through a consortium of diverse partners. These include University of Montenegro - Institute of Marine Biology, as Lead partner, Department of Labor Market Policies, Education, Training from Puglia Region, Italy, Service for the Competitiveness of Productive Systems from Molise Region, Italy, State Agency for Strategic Programming and Aid Coordination, Albania, Ministry of Economic Development of Montenegro, and Ministry of Agriculture and Rural Development, Albania. Through collaborative efforts, the project endeavors to enhance existing educational pathways, establish novel ones, and implement on-the-job training schemes, thereby empowering the workforce and fostering economic growth in the region.

Website:

https://southadriaticskills.org/
www.italy-albania-montenegro.eu/programme/south-adriatic-2021-27

End of Report