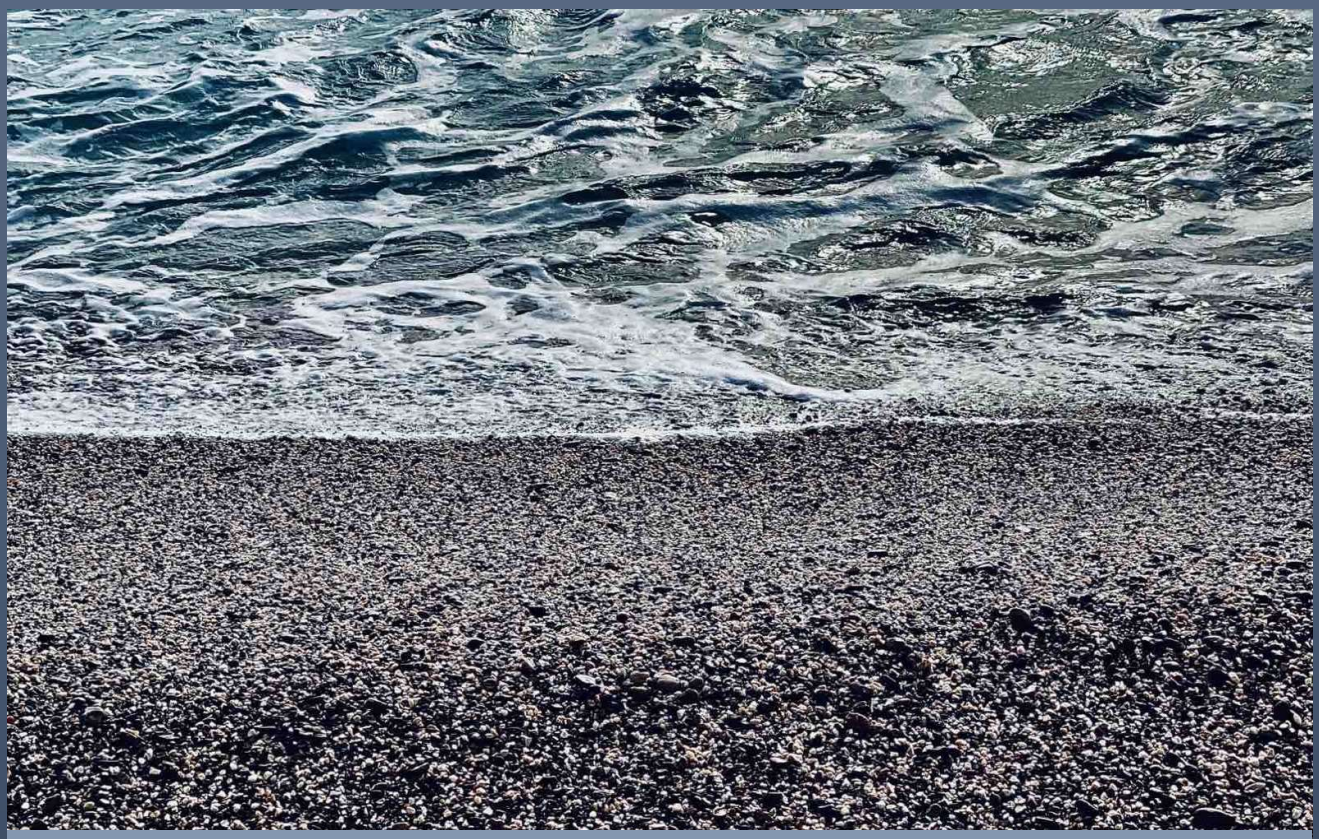
2022



REPORT DEV 2.1

WP2 DEVELOPMENT AND IMPLEMENTATION OF MASTER DEGREE PROGRAM

DEV 2.1 DEVELOPMENT OF MASTER PROGRAM CURRICULA

Development of Regional Joint Master Program in Maritime Environmental Protection and Management – MEP&M
Project no. 619239-EPP-1-2020-1-ME-EPPKA2-CBHE-JP

REPORT ON MASTER PROGRAM MEP&M CURRICULUM WITH SYLLABI

Deliverable information	
Deliverable number	DEV 2.1
Deliverable name	Development of master program curricula
Due date	Month 17
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Work package	WP2
Lead Partner for deliverable	University of Ljubljana
Approved by	Project Management Board
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Document revision history		
Issue date	Version	Comment

Project no. 619239-EPP-1-2020-1-ME-EPPKA2-CBHE-JP
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Content

1. MSc MEP&M Curriculum

Author(s): Marko Papić, University of Ljubljana (Slovenia), Danilo Nikolic, University of Montenegro (Montenegro)

#	Sem.	Course title	# of hours	ECTS	O/E
I	I	**Research Skills, Methods and Tools**	2+2+0	10	O
2	I	**Fundamentals of Environmental Science and Sustainability**	2+2+0	10	O
3	I	**Introduction to the Blue Economy**	2+2+0	10	O
4	II	**Marine Ecology and Conservation**	2+1+1	10	O
5	II	**Marine Environmental Pollution and Prevention**	2+1+1	10	O
6	II	**GHG Emission and Climate Change Mitigation Policies**	2+1+1	10	O
7	III	**Environmental Management Standards and Impact Assessment**	2+2+0	10	O
8	III	**Elective Course #1**	2+1+1	10	E
9	III	**Elective Course #2**	2+1+1	10	E
		Sustainable Development of Maritime Transport and Ports			
		Sustainable Development of Coastal Tourism			
		Management of Offshore Energy and Mineral Resources			
		Fisheries Management			
		Integrated Coastal Management			
		Management of Protected Marine Areas And Species			
		Maritime Safety and Security			
		Entrepreneurship and Innovation			
13	IV	Professional Practice/Research		12	
14	IV	Master Degree Thesis		18	

Legend:

Categories	A	B	C	D	E
Obligatory %	(5-10%)	(50-60%)	(12-20%)	10%	10-20%
Obligatory ECTS	6-12	60-72	14,4-24	12	12-18
Achieved ECTS	**10**	**60**	**20**	**12**	**18**

A BASIC SUBJECT – methodological preparation and general culture
B CHARACTERISTIC SUBJECT – preparation for scientific discipline
C INTERDISCIPLINARY/INTEGRATING SUBJECT – subdisciplines, profile, and subject group with the election
D ADDITIONAL SUBJECT – professional practice
E CONCLUDING OBLIGATIONS

2. MSc MEP&M Course Syllabi

Author(s): Marko Papić, University of Ljubljana (Slovenia), Danilo Nikolic, University of Montenegro (Montenegro)

Subject title	Research skills, methods and tools			
Subject code	**Subject status**	**Semester**	**ECTS**	**Class load**
	Obligatory	**I**	**10**	**2L+2E+0P**

STUDY PROGRAMMES FOR WHICH IT IS ORGANIZED:

Academic master's degree program in Maritime Environmental Protection and Management, 2 years, 120 ECTS

ADMISSION REQUIREMENT:

No prerequisites for course enrolment and attending

GOALS OF STUDY:

Conducting quality research requires practical skills and a particular knowledge of the contextual framework, which are the focus of this introductory module. Emphasis is placed on workshop/event/project opportunities to develop and practice skills in research planning and analysis, communication, writing and oral presentation. In addition, data sources, standards, and statistical tools will be introduced, prior to data analysis and representation. Statistical approaches, including factor analysis, will be provided to students to conduct high-quality research for the study of the marine environment.

NAME AND SURNAME OF PROFESSOR AND ASSISTANT:

Prof. Dr. Tatijana Dlabač, Prof. Dr. Milena Dževerdanovic Pejović, Dr. Llambi Prendi, Prof. Dr. Ermelinda Kordha, Dr. Maja Škurić, Prof. Asoc. Kristofor Lapa Prof. Asoc. Enkelejd Mehilli

TEACHING METHOD:

Lectures and project works. Preparation of the final exam. Consultations.
MEP&M digital learning platform will be used to perform the pedagogical process for students unable to attend specific lectures and in order to engage the students to partially perform their workload online. This means that additional learning material as well as (partially) recorded lectures and exercises in the electronic multimedia format will be available to students. In terms of teaching method when using MEP&M digital learning platform, student centered approaches will be fostered, so that students will actively engage with the material available online.

SUBJECT CONTENT:

Pr veparatory weeks	Preparation and semester enrolment
I week	Introduction of the subject. Basic concepts of research and methodology.
II week	The introduction to science. Scientific-research activity.
III week	Ethics inresearch work, academic integrity.
IV week	Referencing. Scientific journals.
V week	Research work and methods.
VI week	Data collection and sampling, online data bases.
VII week	Research problem. Hypothesis.
VIII week	The use of language in writing, discourse analysis of style, disocurse patterns and rhetorical means.
IX week	Discourse analysis of language data in different institutional and technological setting.
X week	Communication skills in reporting.
XI week	Research plan creation.
XII week	Sampling and statistics, quantitative and qualitative analyses – part I (MEGASTAT and/or SPSS).
XIII week	Sampling and statistics, quantitative and qualitative analyses – part II (MEGASTAT and/or SPSS).
XIV week	Designing and writing of research proposal.
XV week	Oral presentation of research work.
XVI week	**Final Exam**
Final week	Semester verification and marks enrolment
XVIII-XXI week	Additional and remedial classes and corrective exam term

STUDENTS' WORKLOAD PER SUBJECT

Per week	During semester
10 credits x 40/30 = 13 hours + 20 minutes **Structure:** **2** hours of lectures **1** hour of exercise **1** hour of practical work **9** hours **20** minutes of individual work, including consultations	**Teaching and the Final Exam:** (13h + 20 min.) x 16 = 258h + 20 minutes **Necessary preparation before term starting** (admin., enrolment, verification): (13h + 20 min) x 2 = 26h + 40min **Total hours for the course:** 10 x 30 = 300h **Additional hours for preparing correction of final exam, including the taking of the exam:** 15h **Structure of the students' duties:** 258h + 20 min.(lectures) + 26h + 40min + 15h (additional work)

Students are obliged to attend lectures, take compulsory assignments and final exam.

LITERATURE:

1. E-materials from the lectures.
2. Silyn-Roberts, Heather, **Writing for Science and Engineering**, 2012, Elsevier, ebook ISNB:9780080982854
3. Al-Karkhi, Abbas, **Applied Statistics for Environmental Science withR**, 2019, Elsevier, ebook ISBN:9780128186220
4. Benoit Cushman-Roisin, **Data, Statistics, and Useful Numbers for Environmental Sustainability: Bringing the Numbers to Life**, 2021, Elsevier, ebook ISBN:9780128229583
5. Ben Kei Daniel, Tony Harland, **Higher Education Research Methodology: A Step-by-Step Guide to the Research Process,** 2017, Taylor&Francis, ebook ISBN:9781315149783
6. Kumar, R. **Research methodology: a step-by-step guide for beginners**, 5th Edition, 2018, SAGE Publications Ltd, ebook ISBN: 978152645708.
7. Dževerdanović-Pejović M. (2020) **Discourse Analysis of the Research Articles About Marine Environment Relating to the Adriatic Coast**. In: Joksimović D., Đurović M., Zonn I.S., Kostianoy A.G., Semenov A.V. (eds) The Montenegrin Adriatic Coast. The Handbook of Environmental Chemistry, vol 110. Springer
8. Schiffrin, D., Tannen, D., & Hamilton, H. E. **The handbook of discourse analysis 2**. John Wiley & Sons, Inc. 2015. Second edition. Ebook ISBN:9781118584194.

METHODS OF KNOWLEDGE ASSESSMENT AND MARKING:

1. Attendance and activity in classes, from 0 to 6 points.
2. Test I, from 0 to 8 points.
3. Test II, from 0 to 8 points.
4. Test III, from 0 to 8 points.
5. Project work, from 0 to 40 points.
6. Final exam, from 0 to 30 points.

Passing mark is awarded if the student collects more than 50 points.

SPECIAL NOTE FOR THE SUBJECT:

All activities will be conducted in English. Lectures and exercises will be partially recorded. Additional learning materials in the electronic format along with the recorded lectures and exercises will be uploaded to the MEP&M digital learning platform, so that students will be able to follow attend the course from a distance.

EXPECTED LEARNING OUTCOMES:

Upon successful completion of the course, the student will be able to:

- Explain the concept of research and methodology;
- Learn basic concepts of the academic integrity;
- Describe methods and research tools and use appropriate software in theanalysis and compare their advantages and disadvantages;
- Identify the research plan; formulation and presentation of research results;
- Write and present a research paper independently.

QUALITY ASSESSMENT METHODS ENSURING THE DESIRED LEARNING OUTCOMES:

Survey carried out by the University, List of student attendance, Teaching process monitored by the Faculty, Analysis of the examination passing rate (Quality Management System in compliance with ISO 9001)

DATA PREPARED BY:	Prof. Dr. Tatijana Dlabač, Prof. Dr. Milena Dzeverdanovic Pejovic, Dr. Llambi Prendi, Prof. Dr. Ermelinda Kordha, Dr. Maja Skuric, Prof. Asoc. Kristofor Lapa, Prof. Asoc. Enkelejd Mehilli
NOTE:	

Subject title	Fundamentals of environmental science, pollution and sustainable development			
Subject code	**Subject status**	**Semester**	**ECTS**	**Class load**
	Obligatory	**I**	**10**	**2L+1E+1P**

STUDY PROGRAMMES FOR WHICH IT IS ORGANIZED:

Academic master degree program in Maritime environmental protection and management, 2 years, 120 ECTS

ADMISSION REQUIREMENT:

No prerequisites for course enrolment and attending

GOALS OF STUDY:

This module covers the major themes of modern environmental science involving humans and sustainability: such as maintaining biodiversity and natural resources; and sustaining environmental quality and human societies. Students will gain an awareness of the importance of Earth systems (atmosphere, hydrosphere, lithosphere, biosphere) in sustaining our daily lives, as well as the scientific foundations and tools necessary to apply critical thinking to contemporary environmental issues, with a particular focus on the United Nations Sustainable Development Goals and their implementation.

NAME AND SURNAME OF PROFESSOR AND ASSISTANT:

Dr. Danijela Joksimovic, Dr. Rajko Martinovic, Prof. Dr. Danilo Nikolic, MSc Radmila Gagic, Dr. Milidin Bakalli, Prof. Erjola Keçi, Dr. Stela Stefa; Dr. Aurora Bakaj, Dr. Anisa Myrtaj

TEACHING METHOD:

Lectures and debates.The course consists of lectures and discussion sessions. There is a large volume of reading, mostly from the scientific literature. Group work and presentations will be part of the teaching.
MEP&M digital learning platform will be used to perform the pedagogical process for students unable to attend specific lectures and in order to engage the students to partially perform their workload online. This means that additional learning material as well as (partially) recorded lectures and exercises in the electronic multimedia format will be available to students. In terms of teaching method when using MEP&M digital learning platform, student centered approaches will be fostered, so that students will actively engage with the material available online.

SUBJECT CONTENT:

Preparatory weeks	Preparation and semester enrolment
I week	Introduction to the subject.The Earth.Atmosphere (Composition. Structure. Weather and Climate. Atmospheric circulation). Lithosphere (Composition. Earth structure. Soil.)
II week	Hydrosphere (Freshwater and seawater. Ocean structure.). Biosphere (Ecosystems. Ecology. Biomes. Biodiversity. Interactions among species).
III week	Natural biogeochemical cycles (Carbon cycle. Nitrogen cycle. Phosphorus cycle. Sulphur cycle. Water cycle.)
IV week	Environmental protection (definition, stressors and responses).
V week	Soil and sediment pollution, waste, and related issues.General perspective.
VI week	Air and noise pollution and related issues. General perspective.
VII week	Water pollution and related issues. General perspective.
VIII week	Current day impact on ecosystems and the Planetary Boundary framework.
IX week	Introduction of coastal geomorphology (morphology and dynamics of sedimentary coasts, types of costs, sedimentary transport and littoral cells).
X week	Coastal erosion. Vulnerability, impacts and adaptation of coastal zones to global change.
XI week	Human health and environmental risks.
XII week	Environmental Policies.
XIII week	Land and Water use. Food. Forestry. Urban land development. Transportation infrastructure. Mining. Fishing.

XIV week	Energy resources and consumption. Interaction between human population and economic activities. Principles of sustainable development. UN sustainable development goals.
XV week	Team project presentations
XVI week	**Final exam**
Final week	Semester verification and marks enrolment
XVIII-XXI week	Additional and remedial classes and corrective exam term

STUDENTS' WORKLOAD PER SUBJECT

Per week	**During semester**
10 credits x 40/30 = 13 hours + 20 minutes **Structure:** **2** hours of lectures **2** hour of exercise **9** hours **20** minutes of individual work, including consultations	**Teaching and the Final Exam:** (13h + 20 min.) x 16 = 258h + 20 minutes **Necessary preparation before term starting** (admin., enrolment, verification): (13h + 20 min) x 2 = 26h + 40min **Total hours for the course:** 10 x 30 = 300h **Additional hours for preparing correction of final exam, including the taking of the exam:** 15h **Structure of the students' duties:** 258h + 20 min.(lectures) + 26h + 40min + 15h (additional work)

Students are obliged to attend lectures, take compulsory assignments and final exam.

LITERATURE:

1. Lecturing materials.
2. Hance D. Smith, Juan Luis Suárez de Vivero, Tundi S. Agardy, **Routledge Handbook of Ocean Resources and Management**, 2016, Taylor&Francis, ebook ISBN:9780203115398
3. Roy, Mousumi, **Sustainable Development Strategies**, 2020, Elsevier, ebook ISBN: 9780128189207
4. Sten Thore, **Measuring Sustainable Development Goals Performance**, 2021, Elsevier, ebook ISBN: 9780323902687
5. Klemes, Jiri, **Assessing and Measuring Environmental Impact and Sustainability**, 2015, Elsevier, ebook ISBN:9780127999685
6. Carmen Teodosiu, **Assessing Progress toward Sustainability: Frameworks, Tools and Case Studies**, 2022, Elsevier, ebook ISBN:9780323858519
7. Mark Brusseau, Ian Pepper, Charles Gerba, **Environmental and Pollution Science**, 2019, Elsevier, eBook ISBN: 9780128147207
8. Beiras, R. (2018). **Marine pollution: sources, fate and effects of pollutants in coastal ecosystems,** 2018, Elsevier, eBook ISBN: 9780128137376
9. Krishna, I.V Murali, **Environmental Management**, 2017, Elsevier, ebook ISBN: 9780128119891
10. Monaco, A., Prouzet, P. (Eds.). **Vulnerability of coastal ecosystems and adaptation**, 2014, John Wiley & Sons. e-book ISBN: 978-1-119-00775-3
11. Edward J. Tarbuck, Frederick K Lutgens, Dennis G. Tasa, **Earth Science**, 2018, Pearson, ISBN-10: 0-134-54353-X, ISBN-13: 9780134543536
12. Collection of scientific papers.

METHODS OF KNOWLEDGE ASSESSMENT AND MARKING:

1. Project presentations, from 0 to 40 points;
2. Final exam, from 0 to 50 points;
3. Attendance and class activities, from 0 to 10 points;

Passing mark is awarded if the student collects more than 50 points.

SPECIAL NOTE FOR THE SUBJECT:

All activities will be conducted in English. Lectures and exercises will be partially recorded. Additional learning materials in the electronic format along with the recorded lectures and exercises will be uploaded to the MEP&M digital learning platform, so that students will be able to follow attend the course from a distance.

EXPECTED LEARNING OUTCOMES:

Upon successful completion of the course, the student will be able to:

- Explain the importance of environment and impact in living world.
- Explain the sustainability of biodiversity and resources.
- Identify the main pollutants in environmental and their risks.
- Identify the factors that contribute in global changing
- Recognize the policy of sustainability for environment issues.

QUALITY ASSESSMENT METHODS ENSURING THE DESIRED LEARNING OUTCOMES:

Survey carried out by the University, List of student attendance, Teaching process monitored by the Faculty, Analysis of the examination passing rate (Quality Management System in compliance with ISO 9001)

DATA PREPARED BY:	Dr. Danijela Joksimovic, Prof. Dr. Danilo Nikolic, Dr. Milidin Bakalli, Dr. Rajko Martinovic, MSc Radmila Gagic, Prof. Erjola Keçi, Dr. Stela Stefa; Dr. Aurora Bakaj, Dr. Anisa Myrtaj
NOTE:	

Subject title	Introduction to the Blue Economy			
Subject code	**Subject status**	**Semester**	**ECTS**	**Class load**
	Obligatory	**I**	**10**	**2L+2E+0P**

STUDY PROGRAMMES FOR WHICH IT IS ORGANIZED:

Academic master's degree program in Maritime environmental protection and management, 2 years, 120 ECTS

ADMISSION REQUIREMENT:

No prerequisites for course enrolment and attending

The emergence of the blue economy highlights the need to integrate multidisciplinary concepts related to exploitable marine resources. The different sectors will be introduced: fisheries & aquaculture, sustainable coastal tourism, shipping, offshore mineral extraction, and recent developments in bioprospecting and biotechnology in relation to agri-food, pharmaceutical and cosmetic opportunities. The module will address integrated maritime policy, marine spatial planning directive and blue growth policies. The legislative tools concerning the ownership of marine and maritime resources and the main governance systems that govern these properties, including the concepts of intellectual property and value redistribution will also be tackled. Finally, the way these activities are managed and regulated in various regions of the world will be discussed, as well as the opportunities and impacts of these sectors for the development of the economy.

NAME AND SURNAME OF PROFESSOR AND ASSISTANT:

Prof. Dr. Osman Metalla – Associated professor, Prof. Asoc. Ermelinda Kordha, Dr. Maja Škurić, Prof. Dr. Danilo Nikolic, Dr.Theocharis Plomaritis

TEACHING METHOD:

Lectures and debates. Preparation of one seminar paper on assigned topic, preparation for tests and final exam. Work on simulator. Consultations.

MEP&M digital learning platform will be used to perform the pedagogical process for students unable to attend specific lectures and in order to engage the students to partially perform their workload online. This means that additional learning material as well as (partially) recorded lectures and exercises in the electronic multimedia format will be available to students. In terms of teaching method when using MEP&M digital learning platform, student centered approaches will be fostered, so that students will actively engage with the material available online.

SUBJECT CONTENT:

Preparatory weeks	Preparation and semester enrolment
I week	Introduction to the concept of the blue economy. Challenges to the traditional Ocean economy.
II week	Transition to the Blue economy. Challenges to the Blue economy.
III week	Aquaculture. Overview of the sector. Market trends and future demand. Regulatory framework.
IV week	Marine biotechnology. Overview of the sector. Market trends and future demand. Regulatory framework.
V week	Fisheries. Overview of the sector. Market trends and future demand. Regulatory framework.
VI week	Marine offshore oil&gas energy and marine mineral resources. Overview of the sector. Market trends and future demand. Regulatory framework.
VII week	Marine renewable energy. Overview of the sector. Market trends and future demand. Regulatory framework.
VIII week	Shipbuilding and maritime transport. Overview of the sector. Market trends and future demand. Regulatory framework.
IX week	Coastal and maritime tourism. Overview of the sector. Market trends and future demand. Regulatory framework.
X week	Coastal resources management.
XI week	Blue carbon ecosystems and ecosystem-based adaption and management.
XII week	Blue economy financing.
XIII week	EU Blue growth strategies. EUSAIR.

XIV week	Regulation and planning in Mediterranean sea. Overview of key marine sectors. Regulatory regimes. Spatial impact and planning. Related Strategies.
XV week	Team project presentations.
XVI week	**Final Exam**
Final week	Semester verification and marks enrolment
XVIII-XXI week	Additional and remedial classes and corrective exam term

STUDENTS' WORKLOAD PER SUBJECT

Per week	**During semester**
10 credits x 40/30 = 13 hours + 20 minutes **Structure:** **2** hours of lectures **1** hour of exercise **1** hour of practical work **9** hours **20** minutes of individual work, including consultations	**Teaching and the Final Exam:** (13h + 20 min.) x 16 = 258h + 20 minutes **Necessary preparation before term starting** (admin., enrolment, verification): (13h + 20 min) x 2 = 26h + 40min **Total hours for the course:** 10 x 30 = 300h **Additional hours for preparing correction of final exam, including the taking of the exam:** 15h **Structure of the students' duties:** 258h + 20 min.(lectures) + 26h + 40min + 15h (additional work)

Students are obliged to attend lectures, take compulsory assignments and final exam.

LITERATURE:

1. E-lecturing materials
2. Md. Nazrul Islam, Steven M. Bartell, **Global Blue Economy: Analysis, Developments, and Challenges**, 2022, Taylor&Francis, ebook ISBN: 9781003184287
3. Robert C. Brears. **Developing the Blue Economy**, Springer, 2021, ebook ISBN: 978-3-030-84216-1
4. World Bank Group. **The potential of Blue Economy. Increasing Long Term Benefits of the sustainable use of marine resources for small island and coastal least developed countries**. (available online) https://openknowledge.worldbank.org/handle/10986/26843
5. AbhijitMitra, NibetikaMuhopadhyay, SangitaAfarwal**A comprehensive book on blue economy** ISBN: 978-81-951712-5-5 (available online)
6. Different research papers.

METHODS OF KNOWLEDGE ASSESSMENT AND MARKING:

1. Project presentations, from 0 to 40 points;
2. Final exam, from 0 to 50 points;
3. Attendance and class activities, from 0 to 10 points;

Passing mark is awarded if the student collects more than 50 points.

SPECIAL NOTE FOR THE SUBJECT:

All activities will be conducted in English. Lectures and exercises will be partially recorded. Additional learning materials in the electronic format along with the recorded lectures and exercises will be uploaded to the MEP&M digital learning platform, so that students will be able to follow attend the course from a distance.

EXPECTED LEARNING OUTCOMES:

Upon successful completion of the course, the student will be able to:

- Demonstrates a knowledge and understanding of the blue economy, blue growth and marine special planning for e sustainable marine development.
- Categorize the Most Common marine activities and have adequate knowledge on the different sectors that will be introduced: fisheries & aquaculture, sustainable coastal tourism, shipping, offshore mineral extraction, and recent developments in bioprospecting and biotechnology in relation to agri-food.
- Know and interpret the legislative tools concerning the ownership of marine and maritime resources and the main governance systems that govern these properties, including the concepts of intellectual property and value redistribution.

• Identify the impacts of these sectors for the development of the economy • Understand basic principles of entrepreneurship in marine environmental management and innovative solutions in protecting sea and coastal areas. • Understand and demonstrate that is able to implement EU Blue growth strategy.	
QUALITY ASSESSMENT METHODS ENSURING THE DESIRED LEARNING OUTCOMES: Survey carried out by the University, List of student attendance, Teaching process monitored by the Faculty, Analysis of the examination passing rate (Quality Management System in compliance with ISO 9001)	
DATA PREPARED BY:	Prof. Dr. Osman Metalla, Prof. Asoc. Ermelinda Kordha, Dr. Maja Škurić, Prof. Dr. Danilo Nikolic, Dr. Theocharis Plomaritis
NOTE:	

Subject title	Marine ecology and conservation			
Subject code	**Subject status**	**Semester**	**ECTS**	**Class load**
	Obligatory	**II**	**10**	**2L+1E+1P**

STUDY PROGRAMMES FOR WHICH IT IS ORGANIZED:

Academic master degree program in Maritime environmental protection and management, 2 years, 120 ECTS

ADMISSION REQUIREMENT:

No prerequisites for course enrolment and attending

GOALS OF STUDY:

Ecology is the study of the interaction between organisms and the environment. In this course, we will investigate the relationship between abiotic (nonliving) and biotic (living) components of an ecosystem. Building upon an introduction to environmental factors, we will examine the interplay between these components at the organismal, population, community, and ecosystem levels. Throughout the course, we will discuss current ecological applications and issues, such as habitat destruction, sustainability, disease, invasive species, and global climate change.We will review recent peer-reviewed marine ecology studies as well as popular articles to familiarize ourselves with the latest research.

NAME AND SURNAME OF PROFESSOR AND ASSISTANT:

Dr. Slavica Petovic, Dr. Vesna Macic, Prof. Asoc. Erjola Keçi, Prof. Asoc. Hajdar Kiçaj, Prof. Asoc. Denada Sota, Dr. Miriam Hampel

TEACHING METHOD:

Lectures and debates. Analysis of practical study cases. Preparation of one seminar paper on an assigned topic, preparation for tests and final exam. Practical work(fieldwork, sampling). Consultations.
MEP&M digital learning platform will be used to perform the pedagogical process for students unable to attend specific lectures and in order to engage the students to partially perform their workload online. This means that additional learning material as well as (partially) recorded lectures and exercises in the electronic multimedia format will be available to students. In terms of teaching method when using MEP&M digital learning platform, student centered approaches will be fostered, so that students will actively engage with the material available online.

SUBJECT CONTENT:

Preparatory weeks	Preparation and semester enrolment
I week	Introduction to the subject. Marine ecology and conservation.
II week	Chemical and Physical Features of Seawater.
III week	Classification systems for marine communities.
IV week	Benthic living: the seashore.
V week	Benthic living: sublittoral and deep seabed.
VI week	Marine ecology-pelagic habitats.
VII week	Food webs (primary producer, apex predator, trophic level, trophic cascade, keystone species)
VIII week	Population Ecology
IX week	Competition, recruitment, and succession
X week	Ecosystem Based Management in the Marine Environment
XI week	The Impact of Humans on the Marine Environment
XII week	Fishery and mariculture
XIII week	Non-indigenous species
XIV week	Impact of climate change
XV week	Biological Tools for Marine Conservation
XVI week	**Final exam**
Final week	Semester verification and marks enrolment
XVIII-XXI week	Additional and remedial classes and corrective exam term

STUDENTS' WORKLOAD PER SUBJECT

Per week	**During semester**

10 credits x 40/30 = 13 hours + 20 minutes **Structure:** **2** hours of lectures **1** hour of exercise **1** hour of practical work **9** hours **20** minutes of individual work, including consultations	**Teaching and the Final Exam:** (13h + 20 min.) x 16 = 258h + 20 minutes **Necessary preparation before term starting** (admin., enrolment, verification): (13h + 20 min) x 2 = 26h + 40min **Total hours for the course:** 10 x 30 = 300h **Additional hours for preparing correction of final exam, including the taking of the exam:** 15h **Structure of the students' duties:** 258h + 20 min.(lectures) + 26h + 40min + 15h (additional work)

Students are obliged to attend lectures, take compulsory assignments and final exam.

LITERATURE:

1. Jerónimo Pan, Paula D. Pratolongo, **Marine Biology: A Functional Approach to the Oceans and their Organisms**, 2022, Taylor&Francis, ebook ISBN:9780429399244
2. Frances Dipper,**Elements of Marine Ecology**, 5th Edition, 2022, Elsevier, eBook ISBN: 9780081028278
3. Editors: Gary Lamberti and F. Hauer, **Methods in Stream Ecology, Volume 2: Ecosystem Function**, 3rd edition, 2017, eBook ISBN: 9780128132692
4. Editor: Charles Sheppard, **Advances in Marine Biology**, 2021, eBook ISBN: 9780323851077
5. Hiscock, K. **Marine biodiversity conservation: A practical approach**, 2014, Routledge,ebook ISBN 9780415723565.
6. Peter Castro and Michael Huber, **Marine Biology, 11th Edition**, 2019, ebook ISBN10: 1259880036 | ISBN13: 9781259880032,

METHODS OF KNOWLEDGE ASSESSMENT AND MARKING:

1. Attendance and activity in classes, from 0 to 10 points.
2. Practical work on exercises - from 0 to 30 points.
3. Final exam, from 0 to 60 points.

Passing mark is awarded if the student collects more than 50 points.

SPECIAL NOTE FOR THE SUBJECT:

All activities will be conducted in English. Lectures and exercises will be partially recorded. Additional learning materials in the electronic format along with the recorded lectures and exercises will be uploaded to the MEP&M digital learning platform, so that students will be able to follow attend the course from a distance.

EXPECTED LEARNING OUTCOMES:

Upon successful completion of the course, the student will be able to:

- Understand the science and scope of ecology
- Understanding the principles of Ecosystem Based Management in the marine environment
- Consider why organisms are found where they are (and not where they aren't)
- Evaluate how the distribution and abundance of organisms are shifting in the face of climate change
- Critically analyze natural resource management decisions
- Develop your own skills in researching and evaluating information

QUALITY ASSESSMENT METHODS ENSURING THE DESIRED LEARNING OUTCOMES:

Survey carried out by the University, List of student attendance, Teaching process monitored by the Faculty, Analysis of the examination passing rate (Quality Management System in compliance with ISO 9001)

DATA PREPARED BY:	Dr. Slavica Petović, Dr. Vesna Macic, Prof. Asoc. ErjolaKeçi, Prof.Asoc. Hajdar Kiçaj, Prof.Asoc. Denada Sota
NOTE:	

Subject title	Marine environmental pollution and prevention			
Subject code	**Subject status**	**Semester**	**ECTS**	**Class load**
	Obligatory	**II**	**10**	**2L+1E+1P**

STUDY PROGRAMMES FOR WHICH IT IS ORGANIZED:

Academic master degree program in Maritime environmental protection and management, 2 years, 120 ECTS

ADMISSION REQUIREMENT:

No prerequisites for course enrolment and attending

GOALS OF STUDY:

In relation to human development, students identify and comprehend the main anthropogenic impacts on marine ecosystems, assess their impact and quantify the degree of risk related to these pressures. Impact assessment at different levels of biological organisation as well as thedifferent approaches for the identification of hazard and risk will be explained. Suitable objects for the protection of ecosystems from anthropogenic threatswill be identified. Finally, on more practical and legal aspects, students learn how to implement the scientific process of creating an MPA and the legal principles governing marine environmental issues at national and European level.

NAME AND SURNAME OF PROFESSOR AND ASSISTANT:

Prof. Dr. Danilo Nikolić, MSc Radmila Gagić; Dr. Stela Sefa, Prof. ErjolaKeçi, Dr. Milidin Bakalli; UV - Dr. Aurora Bakaj, Prof. As. Kristofor Lapa; Dr. Martin Diaz M.Lura

TEACHING METHOD:

Lectures and debates.The course consists of lectures and discussion sessions. There is a large volume of reading, mostly from the scientific literature. Group work and presentations will be part of the teaching.
MEP&M digital learning platform will be used to perform the pedagogical process for students unable to attend specific lectures and in order to engage the students to partially perform their workload online. This means that additional learning material as well as (partially) recorded lectures and exercises in the electronic multimedia format will be available to students. In terms of teaching method when using MEP&M digital learning platform, student centered approaches will be fostered, so that students will actively engage with the material available online.

SUBJECT CONTENT:

Preparatory weeks	Preparation and semester enrolment
I week	Introduction to the subject. Definition of marinepollution. Marine pollutants. Sources of marine pollution.
II week	Blue economy sector activities and marine pollution. General overview.
III week	Marine pollution by oil. Oil spills. Measures for prevention and control of marine pollution. Oil spill containment and cleaning-up methods International and national legislative on the protection of the sea and the marine environment. Contingency plan.
IV week	Atmospheric pollution by harmful exhaust gasses from shipping. International and national legislative.Measures for prevention and control of marine pollution.
V week	Air quality monitoring and reporting. Practical exercises.
VI week	Marine pollution by chemicals. Chemical spills. Chemical spill containment and cleaning-up methods. International and national legislative. Measures for prevention and control of marine pollution.
VII week	Marine pollution by sewage. International and national legislative. Measures for prevention and control of marine pollution.
VIII week	Marine pollution by garbage (plastics). Marine litter containment and cleaning-up methods. International and national legislative.Measures for prevention and control of marine pollution.
IX week	Ballast water pollution from shipping activities. Invasive species containment and blast water cleaning-up methods. International and national legislative. Measures for prevention and control of marine pollution.
X week	Marine pollution from ships antifouling paints and ship recycling.International and national

	legislative. Measures for prevention and control of marine pollution.
XI week	Marine pollution from aquaculture activities. International and national legislative. Measures for prevention and control of marine pollution.
XII week	Marine pollution from coastal tourism activities. Measures for prevention and control of marine pollution.
XIII week	Sediment quality monitoring and reporting. Practical exercises.
XIV week	Seawater quality monitoring and reporting. Practical exercises.
XV week	Group assignment presentations
XVI week	**Final exam**
Final week	Semester verification and marks enrolment
XVIII-XXI week	Additional and remedial classes and corrective exam term

STUDENTS' WORKLOAD PER SUBJECT

Per week	**During semester**
10 credits x 40/30 = 13 hours + 20 minutes **Structure:** **2** hours of lectures **1** hour of exercise **1**hour of practical work **9**hours **20** minutes of individual work, including consultations	**Teaching and the Final Exam:** (13h + 20 min.) x 16 = 258h + 20 minutes **Necessary preparation before term starting** (admin., enrolment, verification): (13h + 20 min) x 2 = 26h + 40min **Total hours for the course:** 10 x 30 = 300h **Additional hours for preparing correction of final exam, including the taking of the exam:** 15h **Structure of the students' duties:** 258h + 20 min.(lectures) + 26h + 40min + 15h (additional work)

Students are obliged to attend lectures, take compulsory assignments and final exam.

LITERATURE:

1. Power point presentation materials.
2. Nikinmaa, Mikko, **An Introduction to Aquatic Toxicology**, 2014, Elsevier, ebook ISBN:9780124115743
3. Blasco, Julián, **Marine Ecotoxicology,** 2016, Elsevier, ebook ISBN:9780128033715
4. P. Senthil Kumar, **Modern treatment strategies for marine pollution**, Elsevier, 2021, ebook, ISBN: 978-0-12-822279-9
5. Andrés Hugo Arias and Sandra Elizabeth Botté, **Coastal and Deep Ocean Pollution**, CRC Press, 2020, ebook, ISBN: 978-1-138-56939-3
6. Andrés Hugo Arias and Jorge Eduardo Marcovecchio, **Marine Pollution and Climate Change**, CRC Press 2018, ebook, ISBN 9780367781910
7. Vallero, Daniel, **Air Pollution Calculations**, 2019, Elsevier, ebook ISBN: 9780128149348
8. Mark Zacharias, Jeff Ardron, **Marine Policy: An Introduction to Governance and International Law of the Oceans**, 2020, Taylor&Francis, ebook ISBN: 9781351216227
9. Iliana Christodoulou-Varotsi, **Marine Pollution Control: Legal and Managerial Frameworks**, 2020, Taylor&Francis, ebook ISBN:9781315709925
10. Giuseppe Bonanno, **Plastic Pollution and Marine Conservation**, 2022, Elsevier, ebook ISBN:9780128224717
11. Rani, Meenu, **Remote Sensing of Ocean and Coastal Environments**, 2020, Elsevier, ebook 9780128196045
12. Ram NareshBharagava, Sandhya Mishra, Ganesh DattatrayaSaratale, Rijuta Ganesh Saratale, Luiz Fernando Romanholo Ferreira, **Bioremediation: Green Approaches for a Clean and Sustainable Environment**, 2022, Taylor&Francis, ebook ISBN: 9781003181224
13. Krishna, I.V Murali, **Environmental Management**, 2017, Elsevier, ebook ISBN: 9780128119891
14. Tamara Garcia Barrera, Jose Luis Gomez Ariza, **Environmental Problems in Marine Biology: Methodological Aspects and Applications**, 2017, Taylor&Francis, ebook ISBN: 9781315119113
15. Anjana K Vala, Dushyant R Dudhagara, Bharti P Dave, **Marine Microbial Bioremediation**, 2021, Taylor&Francis, ebook ISBN: 9781003001072
16. John Swarbrooke, **The Impact of Tourism on the Marine Environment**, Good fellow Publishers Ltd, 2020, ISBN: 978-1-911635-59-8

17. Oliver G. Kershaw, **Cruise Ship Pollution**, Nova Science Publishers, 2009, ebook, ISBN: 978-1-61728-215-7
18. Gary M. Rand, **Fundamentals of Aquatic Toxicology - Effects, Environmental Fate**, **and Risk Assessment**, 2nd Edition, CRC Press, 2020, eBook ISBN 9781003075363
19. COMMON IMPLEMENTATION STRATEGY FOR THE WATER FRAMEWORK DIRECTIVE (2000/60/EC) Guidance Document No. 25 GUIDANCE ON CHEMICAL MONITORING OF SEDIMENT AND BIOTA UNDER THE WATER FRAMEWORK DIRECTIVE (available online)
20. IMO available free online literature
21. GL DNV available free online literature

METHODS OF KNOWLEDGE ASSESSMENT AND MARKING:

1. Project presentations, from 0 to 40 points;
2. Final exam, from 0 to 50 points;
3. Attendance and class activities, from 0 to 10 points;

Passing mark is awarded if the student collects more than 50 points.

SPECIAL NOTE FOR THE SUBJECT:

All activities will be conducted in English. Lectures and exercises will be partially recorded. Additional learning materials in the electronic format along with the recorded lectures and exercises will be uploaded to the MEP&M digital learning platform, so that students will be able to follow attend the course from a distance.

EXPECTED LEARNING OUTCOMES:

Upon successful completion of the course, the student will be able to:

- Categorize the most common sources of marine pollution fromblue economy sector activities.
- Describe legislative on pollution prevention of the marine environment from blue economy sector activities
- Describe (technical) measures for pollution prevention of the marine environment from blue economy sector activities.
- Conduct measurements of air, seawater and marine sediment contaminants, and draw conclusion on results.

QUALITY ASSESSMENT METHODS ENSURING THE DESIRED LEARNING OUTCOMES:

Survey carried out by the University, List of student attendance, Teaching process monitored by the Faculty, Analysis of the examination passing rate (Quality Management System in compliance with ISO 9001)

DATA PREPARED BY:	Prof. Danilo Nikolić, MSc Radmila Gagić; Dr. Stela Sefa, Prof. Erjola Keçi, Dr. Milidin Bakalli; Dr. Aurora Bakaj, Prof. Asoc. Kristofor Lapa;
NOTE:	

Subject title	GHG emission and climate change mitigation policies			
Subject code	**Subject status**	**Semester**	**ECTS**	**Class load**
	Obligatory	**II**	**10**	**2L+1E+1P**

STUDY PROGRAMMES FOR WHICH IT IS ORGANIZED:

Academic master degree program in Maritime environmental protection and management, 2 years, 120 ECTS

ADMISSION REQUIREMENT:

No prerequisites for course enrolment and attending

GOALS OF STUDY:

This module covers the scientific, legal and societal aspects of climate change. First, students will examine the science of climate change, the physics of the greenhouse effect, the current state of the descriptors (GHG, temperature, water...), and the expected consequences of the latest IPCC reports. The international legal and political framework of climate change will also be discussed, especially regarding shared responsibilities and ongoing discussions and the history of emissions. A particular focus will be brought on how to react, both on mitigation and adaptation. Mitigation, which aims at reducing greenhouse gas emissions and carbon sequestration, notably through nature-based solutions. And adaptation, which aims to reduce the vulnerability of natural and human systems against the effects of climate change, and thus to safeguard our societies. The issue of financing climate change will be addressed, both in terms of financing response mechanisms and the cost of the consequences. All these elements will be put into perspective in the context of climate change planning.

NAME AND SURNAME OF PROFESSOR AND ASSISTANT:

Prof. Dr. Danilo Nikolić, MSc Radmila Gagić; Prof. Milidin Bakalli, Prof. Erjola Keçi, Dr. Stela Sefa, Dr. Anisa Myrtaj,

TEACHING METHOD:

Lectures and debates.The course consists of lectures and discussion sessions. There is a large volume of reading, mostly from the scientific literature. Group work and presentations will be part of the teaching.
MEP&M digital learning platform will be used to perform the pedagogical process for students unable to attend specific lectures and in order to engage the students to partially perform their workload online. This means that additional learning material as well as (partially) recorded lectures and exercises in the electronic multimedia format will be available to students. In terms of teaching method when using MEP&M digital learning platform, student centered approaches will be fostered, so that students will actively engage with the material available online.

SUBJECT CONTENT:

Preparatory weeks	Preparation and semester enrolment
I week	Introduction to the subject.
II week	Science of climate change.
III week	Emission of GHG and climate change.
IV week	Observed Trends and Impacts of Climate Change.
V week	International Legal and Policy Framework to Address Climate Change.
VI week	EU Legal and Policy Framework to Address Climate Change.
VII week	Technological options for reducing CO2 emissions: wind and solar energies. General perspective.
VIII week	Technological options for reducing CO2 emissions: biomass, hydro and geothermal energies. General perspective.
IX week	Technological options for CO2 capture and storage.
X week	Economics of climate change.
XI week	Climate change adaptation and mitigation.
XII week	Primarily sources of energy: oil, gas, coal, renewables. History of energy demand and supply.
XIII week	Future Climate Scenarios and Proposed Solutions.
XIV week	Energy transition until 2050.
XV week	Group project presentation

XVI week	**Final exam**
Final week	Semester verification and marks enrolment
XVIII-XXI week	Additional and remedial classes and corrective exam term

STUDENTS' WORKLOAD PER SUBJECT

Per week	**During semester**
10 credits x 40/30 = 13 hours + 20 minutes **Structure:** **2** hours of lectures **1** hour of exercise **1** hour of practical work **9** hours **20** minutes of individual work, including consultations	**Teaching and the Final Exam:** (13h + 20 min.) x 16 = 258h + 20 minutes **Necessary preparation before term starting** (admin., enrolment, verification): (13h + 20 min) x 2 = 26h + 40min **Total hours for the course:** 10 x 30 = 300h **Additional hours for preparing correction of final exam, including the taking of the exam:** 15h **Structure of the students' duties:** 258h + 20 min.(lectures) + 26h + 40min + 15h (additional work)

Students are obliged to attend lectures, take compulsory assignments and final exam.

LITERATURE:

1. Lecturing materials.
2. Krishna, I.V Murali, **Environmental Management**, 2017, Elsevier, ebook ISBN: 9780128119891
3. Letcher, Trevor, **Climate Change**, 2021, Elsevier, ebook ISBN: 9780128215753
4. Hasanuzzaman, MD., **Energy for Sustainable Development**, 2019, Elsevier, ebook ISBN: 9780128146453
5. Andrés Hugo Arias and Jorge Eduardo Marcovecchio, **Marine Pollution and Climate Change**, CRC Press 2018, ebook ISBN 9781315119243.
6. Collection of scientific papers.
7. IPCC reports.
8. IMO available online literature
9. GL DNV available online literature

METHODS OF KNOWLEDGE ASSESSMENT AND MARKING:

1. Project presentations, from 0 to 40 points;
2. Final exam, from 0 to 50 points;
3. Attendance and class activities, from 0 to 10 points;

Passing mark is awarded if the student collects more than 50 points.

SPECIAL NOTE FOR THE SUBJECT:

All activities will be conducted in English. Lectures and exercises will be partially recorded. Additional learning materials in the electronic format along with the recorded lectures and exercises will be uploaded to the MEP&M digital learning platform, so that students will be able to follow attend the course from a distance.

EXPECTED LEARNING OUTCOMES:

Upon successful completion of the course, the student will be able to:

- Explain causes of global warming, as well as emission trends and driving forces that are responsible for fossil fuel emissions and deforestation.
- Explain climate policy tools, their theoretical merits and practical experiences
- Identify technological options to reduce emissions, their barriers and costs and co-benefits.
- Explain the understanding of climate mitigation in difference disciplines and the discipline's contribution to climate mitigation.
- Recognize co-benefits, tradeoffs, potentials, and limitations of a wide range of climate change mitigation options, from the energy to the land sector.

QUALITY ASSESSMENT METHODS ENSURING THE DESIRED LEARNING OUTCOMES:

Survey carried out by the University, List of student attendance, Teaching process monitored by the Faculty, Analysis of the examination passing rate (Quality Management System in compliance with ISO 9001)

DATA PREPARED BY:	Prof. Dr. Danilo Nikolic, MSc Radmila Gagić; Prof. Milidin Bakalli, Prof. Erjola Keçi, Dr. Stela Sefa, Dr. Anisa Myrtaj,
NOTE:	

Subject title	Environmental management standards and Impact Assessment			
Subject code	**Subject status**	**Semester**	**ECTS**	**Class load**
	Obligatory	**III**	**10**	**2L+2E+0P**

STUDY PROGRAMMES FOR WHICH IT IS ORGANIZED:

Academic master degree program in Maritime environmental protection and management, 2 years, 120 ECTS

ADMISSION REQUIREMENT:

No prerequisites for course enrolment and attending

GOALS OF STUDY:

The module is designed to introduce the ISO 14000 series of environmental management standards and the concepts, procedures, and methodology of environmental impact assessment (EIA). Students will be invited to develop a critical awareness of the factors affecting the use of EIA as a part of project management in the legislative and regulatory context of newly industrialized and less industrialized countries. This module will expose students to the need for environmental impact assessments and how to prepare the various documents required by state and federal regulations. Environmental risk assessment processes for contaminants will be explained as well as analytical methodologies and implementation of quality standards.

NAME AND SURNAME OF PROFESSOR AND ASSISTANT:

Prof. Dr. Danilo Nikolic, MSc Radmila Gagic, Dr. Mirko Đurović, Dr. Ana Pešić, Dr. Aleksandar Joksimović; Dr. Stela Sefa, Prof. Asoc. Erjola Keçi, Dr. Bledar Pepa

TEACHING METHOD:

Lectures and debates.The course consists of lectures and discussion sessions. There is a large volume of reading, mostly from the scientific literature. Group work and presentations will be part of the teaching.
MEP&M digital learning platform will be used to perform the pedagogical process for students unable to attend specific lectures and in order to engage the students to partially perform their workload online. This means that additional learning material as well as (partially) recorded lectures and exercises in the electronic multimedia format will be available to students. In terms of teaching method when using MEP&M digital learning platform, student centered approaches will be fostered, so that students will actively engage with the material available online.

SUBJECT CONTENT:

Preparatory weeks	Preparation and semester enrolment
I week	Introduction to the subject.Standards and standardization. Objectives and principles of standardization. International Organisation for Standardisation.
II week	Introduction to Quality Management System (QMS) ISO 9000 series.
III week	Introduction to standards for laboratories, control organizations, certification bodies of the ISO 17000 series (ISO 17020 and ISO 17025). Accreditation process.
IV week	Foundations in environmental management. The scope and nature of environmental management.
V week	Principles of environmental management. Tools for environmental management.
VI week	Introduction to Environmental Management Systems (EMS) ISO 14000 series.
VII week	The introduction and implementation of ISO 14001. ISO 14001 structure, purpose, policy.
VIII week	The introduction and implementation of ISO 14004. ISO 14004 structure, purpose, policy.
IX week	Environmental Monitoring and Measurements.
X week	Non-conformance, Corrective and Preventive Action. Principle of Internal Environmental Auditing.
XI week	Eco-Management and Audit Scheme (EMAS). EMS – EMAS comparisons.
XII week	Principles of Environmental Impact Assessment – EIA. EU Directive (85/337/EEC) on EIA.
XIII week	Principles of Strategic Environmental Assessment – SEA. EU Directive 2001/42/EC.

XIV week	Carbon inventories. Principles of Integrated Environmental Assessment (IEA).
XV week	Team project presentations
XVI week	**Final exam**
Final week	Semester verification and marks enrolment
XVIII-XXI week	Additional and remedial classes and corrective exam term

STUDENTS' WORKLOAD PER SUBJECT

Per week	**During semester**
10 credits x 40/30 = 13 hours + 20 minutes **Structure:** **2** hours of lectures **2** hour of exercise **9** hours **20** minutes of individual work, including consultations	**Teaching and the Final Exam:** (13h + 20 min.) x 16 = 258h + 20 minutes **Necessary preparation before term starting** (admin., enrolment, verification): (13h + 20 min) x 2 = 26h + 40min **Total hours for the course:** 10 x 30 = 300h **Additional hours for preparing correction of final exam, including the taking of the exam:** 15h **Structure of the students' duties:** 258h + 20 min.(lectures) + 26h + 40min + 15h (additional work)

Students are obliged to attend lectures, take compulsory assignments and final exam.

LITERATURE:

1. Power point presentation materials.
2. Krishna, I.V Murali, **Environmental Management**, 2017, Elsevier, ebook ISBN: 9780128119891
3. Heras-Saizarbitoria, I (ed.) (2018). **ISO 9001, ISO 14001 and the Management System Standards**. Springer. eBook, https://doi.org/10.1007/978-3-319-65675-5_1. (available online)
4. **ISO 9001:2018. Quality management systems — Requirements**. International Organisation for Standardisation
5. **ISO 17020:2012.Conformity assessment — Requirements for the operation of various types of bodies performing inspection.**International Organisation for Standardisation
6. **ISO 17025:2017. General requirements for the competence of testing and calibration laboratories**.International Organisation for Standardisation
7. **ISO 14001: 2015.Environmental management systems — Requirements with guidance for use.** International Organisation for Standardisation
8. **ISO 14004:2016. Environmental Management Systems - General Guidelines On Implementation**.International Organisation for Standardisation
9. Borja A, Elliott M, Andersen JH, Berg T, Carstensen J, Halpern BS, Heiskanen A-S, Korpinen S, Lowndes JSS, Martin G and Rodriguez-Ezpeleta N (2016) Overview of Integrative Assessment of Marine Systems: The Ecosystem Approach in Practice. Front. Mar. Sci. 3:20. doi: 10.3389/fmars.2016.00020 (available online)
10. https://www.unep.org/resources/report/introduction-environmental-assessment
11. https://www.unep.org/resources/global-environment-outlook-6
12. https://www.millenniumassessment.org/en/index.html
13. https://www.integratedecosystemassessment.noaa.gov/
14. https://ipbes.net/global-assessment

METHODS OF KNOWLEDGE ASSESSMENT AND MARKING:

1. Project presentations, from 0 to 40 points;
2. Final exam, from 0 to 50 points;
3. Attendance and class activities, from 0 to 10 points;

Passing mark is awarded if the student collects more than 50 points.

SPECIAL NOTE FOR THE SUBJECT:

All activities will be conducted in English. Lectures and exercises will be partially recorded. Additional learning materials in the electronic format along with the recorded lectures and exercises will be uploaded to the MEP&M digital learning platform, so that students will be able to follow attend the course from a distance.

EXPECTED LEARNING OUTCOMES:

Upon successful completion of the course, the student will be able to:

- Understands QMS, along with standards for laboratories, control organizations, certification bodies.
- Describe approaches for increased sustainability by using environmental management system: International Standards Organisation (ISO) 14001, Eco-Management and Audit Scheme (EMAS) and define their similarities and differences.
- Describe different types of environmental impact of products.
- Perform a simplified EIA and SEA reporting.

QUALITY ASSESSMENT METHODS ENSURING THE DESIRED LEARNING OUTCOMES:

Survey carried out by the University, List of student attendance, Teaching process monitored by the Faculty, Analysis of the examination passing rate (Quality Management System in compliance with ISO 9001)

DATA PREPARED BY:	Prof. Dr. Danilo Nikolic, MSc Radmila Gagic, Dr. Stela Sefa, Prof. Asoc. Erjola Keçi, Dr. Bledar Pepa
NOTE:	

Subject title	Sustainable Development of Maritime Transport and Ports			
Subject code	**Subject status**	**Semester**	**ECTS**	**Class load**
	Elective	**III**	**10**	**2L+1E+1P**

STUDY PROGRAMMES FOR WHICH IT IS ORGANIZED:

Academic master's degree program in Maritime environmental protection and management, 2 years, 120 ECTS

ADMISSION REQUIREMENT:

No prerequisites for course enrolment and attending

The state of the art of maritime transport of goods and people will be exposed and shipping will be discussed as a source of contamination of marine ecosystems. The environmental risk assessment of anthropogenic discharges from shipping will be addressed, integrating the regulatory framework of wastewater discharges from ships. Bioremediation aspects of shipping wastewater discharges will be addressed, as well as sustainable water services in port areas (water supply) and sustainable waste services. The transition to green shipping and decarbonization will be discussed extensively, including fuel and related emissions (Sulphur Directive), but also offsetting solutions integrating nature-based solutions. Finally, this module will develop economic, social and environmental indicators for EU ports, sustainability indexes and international conventions in place.

NAME AND SURNAME OF PROFESSOR AND ASSISTANT:

Prof.Dr. Osman Metalla, Dr. Shkelqim Sinani, Prof. Dr. Danilo Nikolic, Dr. Eli Vyshka, Dr.Dragana Drakulovic, Dr. Maja Škurić, MSc Radmila Gagic

TEACHING METHOD:

Lectures and debates. Work on simulator. Preparation of a project and final exam. Consultations.
MEP&M digital learning platform will be used to perform the pedagogical process for students unable to attend specific lectures and in order to engage the students to partially perform their workload online. This means that additional learning material as well as (partially) recorded lectures and exercises in the electronic multimedia format will be available to students. In terms of teaching method when using MEP&M digital learning platform, student centered approaches will be fostered, so that students will actively engage with the material available online.

SUBJECT CONTENT:

Preparatory weeks	Preparation and semester enrolment
I week	Introduction to subject.
II week	Port strategy for sustainable development. Circularization and value creation.
III week	Patterns of circular transition. What is a circular economy in EU ports?
IV week	The role of port development companies in transitioning port business ecosystem.
V week	Seaports as nodal points of circular supply chains. Opportunity and challenges for secondary ports.
VI week	Sustainable performance and benchmarking in container terminals. The energy dimension.
VII week	Socio-economic performance assessment for port clusters. More challenges, more solutions?
VIII week	Development of green ports infrastructure.
IX week	Managing sustainable maritime transport.
X week	Innovation and business models for green ports and logistics.
XI week	Optimization of international maritime transport.
XII week	Optimization of local and regional maritime transport.
XIII week	Sustainable maritime transport: strategies for reduction of CO2 emission in shipping.
XIV week	Sustainable maritime transport: marine alternative fuels and power plants.
XV week	Innovation and business models for sustainable maritime transport.
XVI week	**Final exam**
Final week	Semester verification and marks enrolment

XVIII-XXI week	Additional and remedial classes and corrective exam term

STUDENTS' WORKLOAD PER SUBJECT

Per week	**During semester**
10 credits x 40/30 = 13 hours + 20 minutes **Structure:** **2** hours of lectures **1** hour of exercise **1**hour of practical work **9**hours **20** minutes of individual work, including consultations	**Teaching and the Final Exam:** (13h + 20 min.) x 16 = 258h + 20 minutes **Necessary preparation before term starting** (admin., enrolment, verification): (13h + 20 min) x 2 = 26h + 40min **Total hours for the course:** 10 x 30 = 300h **Additional hours for preparing correction of final exam, including the taking of the exam:** 15h **Structure of the students' duties:** 258h + 20 min.(lectures) + 26h + 40min + 15h (additional work)

Students are obliged to attend lectures, take compulsory assignments and final exam.

LITERATURE:

1. Lecturing materials
2. Elvira Haezendonck, **Port strategy for sustainable development**, ISBN978-3-0365-0091-1 (2021) https://www.mdpi.com/books/pdfdownload/book/3528 (available online)
3. Ricard Bertgqvist, Jason Monios; **Green Ports,** 2018, Elsevier, eBook ISBN: 9780128140550
4. Md. Nazrul Islam, Steven M. Bartell, **Global Blue Economy: Analysis, Developments, and Challenges**, 2022, Taylor&Francis, ebook ISBN: 9781003184287
5. GuravSaxena, Ram NareshBharagava, **Bioremediation of industrial waste for environmental safety**, ISBN 978-981-13-1891-7.
6. Robert C. Brears. **Developing the Blue Economy**, Springer, 2021, ebook ISBN: 978-3-030-84216-1
7. Angela Carpenter, Tafsir M. Johansson, Jon A. Skinner, **Sustainability in the Maritime Domain** , Springer, 2018, ISBN: 978-3-030-69325-1
8. Set of research papers.

METHODS OF KNOWLEDGE ASSESSMENT AND MARKING:

1. Attendance and activity in classes, from 0 to 24 points.
2. Practical work - independent project, from 0 to 26 points.
3. Final exam, from 0 to 50 points.

Passing mark is awarded if the student collects more than 50 points.

SPECIAL NOTE FOR THE SUBJECT:

All activities will be conducted in English. Lectures and exercises will be partially recorded. Additional learning materials in the electronic format along with the recorded lectures and exercises will be uploaded to the MEP&M digital learning platform, so that students will be able to follow attend the course from a distance.

EXPECTED LEARNING OUTCOMES:

Upon successful completion of the course, the student will be able to:

- Demonstrate a knowledge and understanding of environmental aspects in shipping and ports.
- Demonstrate good knowledge of the environmental risk assessment of exhaust emission from ships.
- Give contribution in green ports and logistics.
- Explain the concept of decarbonisation in maritime transport.
- Give observation to future sustainable maritime transport.
- Explain methodologies for ballast water samplings.

QUALITY ASSESSMENT METHODS ENSURING THE DESIRED LEARNING OUTCOMES:

Survey carried out by the University, List of student attendance, Teaching process monitored by the Faculty, Analysis of the examination passing rate (Quality Management System in compliance with ISO 9001)

DATA PREPARED BY:	Prof.Dr. Osman Metalla, Dr. Shkelqim Sinani, Prof. Dr. Danilo Nikolic, Dr. Eli Vyshka, Dr. Dragana

	Drakulovic, Dr. Maja Škurić, MSc Radmila Gagic
NOTE:	

Subject title	Sustainable Development of Coastal Tourism			
Subject code	**Subject status**	**Semester**	**ECTS**	**Class load**
	Elective	**III**	**10**	**2L+1E+1P**

STUDY PROGRAMMES FOR WHICH IT IS ORGANIZED:

Academic master's degree program in Maritime environmental protection and management, 2 years, 120 ECTS

ADMISSION REQUIREMENT:

No prerequisites for course enrolment and attending

The concept of sustainable tourism, particularly as applied to coastal areas, is developed in this module. The spatial expression of tourism developments in coastal areas is addressed, in particular to measure the dimension of the phenomenon. Furthermore, the economic, social and environmental consequences of the "sun and beach" tourism model are discussed. Furthermore, this module details territorial planning, an instrument for the sustainable management of tourism developments in coastal areas, and landscape management as a tourism resource. Finally, the place of tourism in protected natural areas will be discussed, with a particular focus on integrated planning and management of tourism in coastal areas and its connection with the maritime passenger transport.

NAME AND SURNAME OF PROFESSOR AND ASSISTANT:

Prof.Dr. Klodiana Gorica, Dr. Zoran Kovacevic, Dr. Maja Škurić, Dr. Brunilda Licaj, Prof. Dr Danilo Nikolic, MSc Radmila Gagic, Dr. Javier Moreno-Andrés

TEACHING METHOD:

Lectures and debates. Preparation of one seminar paper on assigned topic, preparation for final exam. Consultations. MEP&M digital learning platform will be used to perform the pedagogical process for students unable to attend specific lectures and in order to engage the students to partially perform their workload online. This means that additional learning material as well as (partially) recorded lectures and exercises in the electronic multimedia format will be available to students. In terms of teaching method when using MEP&M digital learning platform, student centered approaches will be fostered, so that students will actively engage with the material available online.

SUBJECT CONTENT:

Preparatory weeks	Preparation and semester enrolment
I week	Introduction to the sectors of the Blue economy: coastal tourism areas.
II week	Tourism demand modelling and forecasting. Tourism development: GDP vs. employment.
III week	Sustainable coastal tourism management - some critical approaches.
IV week	European system of tourism indicators for a sustainable destination management, certification and sustainability standards.
V week	Sustainable development goals and tourism.
VI week	Dimensions of coastal sustainable tourism.
VII week	Sustainable Plan Assessment for coastal tourism.
VIII week	Carrying capacity assessment for coastal sustainable tourism.
IX week	Tourism and beach recreation: status and trends in Europe.
X week	Tourism and beach recreation: status, trends and case studies in Montenegro and Albania.
XI week	Recreational tourism.
XII week	Cruise ships and yacht pollution prevention and sustainability.
XIII week	The impact of sustainable cruise ports – maritime passenger traffic.
XIV week	The impact of sustainable marinas – maritime passenger traffic.
XV week	The role and importance of transport within the tourism supply chain.
XVI week	**Final Exam**
Final week	Semester verification and marks enrolment
XVIII-XXI week	Additional and remedial classes and corrective exam term

STUDENTS' WORKLOAD PER SUBJECT

Per week	During semester
10 credits x 40/30 = 13 hours + 20 minutes **Structure:** **2** hours of lectures **1** hour of exercise **1** hour of practical work **9** hours **20** minutes of individual work, including consultations	**Teaching and the Final Exam:** (13h + 20 min.) x 16 = 258h + 20 minutes **Necessary preparation before term starting** (admin., enrolment, verification): (13h + 20 min) x 2 = 26h + 40min **Total hours for the course:** 10 x 30 = 300h **Additional hours for preparing correction of final exam, including the taking of the exam:** 15h **Structure of the students' duties:** 258h + 20 min.(lectures) + 26h + 40min + 15h (additional work)

Students are obliged to attend lectures, take compulsory assignments and final exam.

LITERATURE:

1. **Sustainable Coastal Tourism – An integrated planning and management approach**, United Nations Environment Programme, 2009, https://wedocs.unep.org/handle/20.500.11822/7819 (available online)
2. Micallef, A., & Williams, A. (Eds.),**Beach Management: Principles andPractice** (1st ed.). Routledge, 2009, ebookISBN 9781849713078
3. Goran Karanovic, PersefoniPolychronidou, AnastasiosKarasavvoglou, Helga MaskarinRibaric, **Tourism Management and Sustainable Development**, Springer https://link.springer.com/book/10.1007/978-3-030-74632-2, 2021,ebookISBN: 978-3-030-74632-2
4. Margaret Cessa (Ed.), **Beaches: Erosion, Management Practices and Environmental Implications**, Nova Publishers https://novapublishers.com/shop/beaches-erosion-management-practices-and-environmental-implications/, 2014, ebookISBN: 978-1-63117-240-3
5. MónicaMorais de Brito and MafaldaPatuleia, **Managing, Marketing, and Maintaining Maritime and Coastal Tourism**, 2019, IGI Globl, DOI: 10.4018/978-1-7998-1522-8, ebookEISBN13: 9781799815242
6. Adrian Bull, **Coastal and Marine Tourism**, Routledge, 2019, ISBN-13: 978-0415572767, ISBN-10: 0415572762
7. PatriziaBattilani, Carlos Larrinaga Rodríguez, **Coastal Tourism in Southern Europe in the XXth century: New economy and material culture**, ISBN (ePUB)9783631864722, 2021 November.
8. Joksimović, D., Đurović, M., Zonn, I.S., Kostianoy, A.G., Semenov, A.V., **The Montenegrin Adriatic Coast, Marine Chemistry Pollution**, The Handbook of Environmental Chemistry 110, Springer Nature Switzerland AG, 2021 (http://link.springer.com/bookseries/698)
9. Set of research papers

METHODS OF KNOWLEDGE ASSESSMENT AND MARKING:

1. Attendance and activity in classes, from 0 to 24 points.
2. Practical work - independent project, from 0 to 26 points.
3. Final exam, from 0 to 50 points.

Passing mark is awarded if the student collects more than 50 points.

SPECIAL NOTE FOR THE SUBJECT:

All activities will be conducted in English. Lectures and exercises will be partially recorded. Additional learning materials in the electronic format along with the recorded lectures and exercises will be uploaded to the MEP&M digital learning platform, so that students will be able to follow attend the course from a distance.

EXPECTED LEARNING OUTCOMES:

Upon successful completion of the course, the student will be able to:

- Demonstrate the concept of coastal tourism management development,
- Model and forecast the tourism demand,
- Recognize the importance of the maritime transport in the sustainable coastal tourism management development,
- Give observation in the tourism and beach recreational aspects,
- Differentiate the environmental issues in coastal tourism, and

• Identify Sustainable Plan Assessment for coastal tourism.	
QUALITY ASSESSMENT METHODS ENSURING THE DESIRED LEARNING OUTCOMES: Survey carried out by the University, List of student attendance, Teaching process monitored by the Faculty, Analysis of the examination passing rate (Quality Management System in compliance with ISO 9001)	
DATA PREPARED BY:	Prof.Dr. Klodiana Gorica, Dr. Maja Škurić, Dr. Brunilda Licaj, Prof. Dr Danilo Nikolic, MSc Radmila Gagic
NOTE:	

Course title	Management of offshore energy and marine mineral resources			
Course code	**Course status**	**Semester**	**ECTS**	**Course load**
	Obligatory	**III**	**10**	**2L+2E+0P**

STUDY PROGRAMMES FOR WHICH IT IS ORGANIZED:

Academic master degree program in Maritime environmental protection and management, 2 years, 120 ECTS

ADMISSION REQUIREMENT:

No prerequisites for course enrolment and attending

COURSE GOALS:

The aim of the course is to introduce students withmaritime offshore industry including oil&gas, marine renewable energy and sub sea mineral resources.

NAME AND SURNAME OF PROFESSOR AND ASSISTANT:

Prof. Dr. Danilo Nikolic, MSc Radmila Gagic, Dr. Jonida Salihila, Dr Theocharis Plomaritis

TEACHING METHOD:

Lectures and debates.The course consists of lectures and discussion sessions. There is a large volume of reading, mostly from the scientific literature. Group work and presentations will be part of the teaching.

MEP&M digital learning platform will be used to perform the pedagogical process for students unable to attend specific lectures and in order to engage the students to partially perform their workload online. This means that additional learning material as well as (partially) recorded lectures and exercises in the electronic multimedia format will be available to students. In terms of teaching method when using MEP&M digital learning platform, student centered approaches will be fostered, so that students will actively engage with the material available online.

COURSE CONTENT:

Preparation week	Introductions, preparation and enrolment to the term
I week	Offshore oil and gas industry:Introduction. Market trends. Estimates of oil and gas reserves. Oil and gas exploration and exploitation. An overview of the development of the offshore oil and gas industry.
II week	Offshore oil and gas industry: Offshore construction of oil and gas structures and their division. Fixed and floating oil platforms (bottomside). Deck construction of offshore oil and gas structures (topside).
III week	Offshore oil and gas industry: Influence of the marine environment on the design of offshore oil and gas structures.
IV week	Offshore oil and gas industry: Oil and gas transport facilities from offshore structure to shore / tankers.
V week	Offshore oil and gas industry: Decommissioning.
VI week	Offshore oil and gas industry: Working environment. Innovations. Economics and investments. Risks.
VII week	Seabed mining: Introduction. Market trends. Sector industry structure. Working environment.
VIII week	Seabed mining: Innovations. Economics and investments. Risks.
IX week	Ocean energy – wave and tide: Introduction. Market trends. Sector industry structure. Working environment.
X week	Ocean energy – wave and tide: Wave technology innovations. Risks.
XI week	Offshore wind energy: Introduction. Market trends. Sector industry structure.
XII week	Offshore wind energy: Working environment. Off shore wind technologies Innovations. Risks.
XIII week	Offshore regulations and planning in Mediterranean sea.
XIV week	Individual project presentations.
XV week	**Presentation of project results.**
XVI –XX weeks	Final and make-up exam. Semester verification and administrative procedures.

STUDENTS' WORKLOAD PER SUBJECT

Per week	**During semester**
10 credits x 40/30 = 13 hours + 20 minutes	**Teaching and the Final Exam:** (13h + 20 min.) x 16 = 258h + 20 minutes

Structure: **2** hours of lectures **1** hour of exercise **1**hour of practical work **9**hours **20** minutes of individual work, including consultations	**Necessary preparation before term starting** (admin., enrolment, verification): (13h + 20 min) x 2 = 26h + 40min **Total hours for the course:** 10 x 30 = 300h **Additional hours for preparing correction of final exam, including the taking of the exam:** 15h **Structure of the students' duties:** 258h + 20 min.(lectures) + 26h + 40min + 15h (additional work)

Students are required to attend lectures, prepare project and take the exam(s).

LITERATURE:

1. Power point presentations
2. Shashi Shekhar Prasad Singh, Jatin Agarwal, Nag Mani, **Offshore Operations and Engineering**, 2020, Taylor&Francis, ebook ISBN 9781000731934
3. Kate Johnson, Gordon Dalton, Ian Masters, **Building Industries at Sea: 'Blue Growth' and the New Maritime Economy**, River Publishers, 2018, ISBN 978-87-93609-25-9 (available online)
4. Jafarinejad, Shahryar, **Petroleum Waste Treatment and Pollution Control**, 2017, Elsevier, ebook ISBN: 9780128092439
5. Hashemi, M Reza, Neill, Simon P., **Fundamentals of ocean renewable energy: generating electricity from the sea**, Academic Press, 2018, ebook ISBN: 9780128104491

METHODS OF KNOWLEDGE ASSESSMENT AND MARKING:

1. Project presentations, from 0 to 40 points;
2. Final exam, from 0 to 50 points;
3. Attendance and class activities, from 0 to 10 points;

Passing mark is awarded if the student collects more than 50 points.

SPECIAL NOTE FOR THE SUBJECT:

All activities will be conducted in English. Lectures and exercises will be partially recorded. Additional learning materials in the electronic format along with the recorded lectures and exercises will be uploaded to the MEP&M digital learning platform, so that students will be able to follow attend the course from a distance.

EXPECTED LEARNING OUTCOMES:

Upon successful completion of this subject the student will be able to:

- Specify maritime offshore industry.
- Recognize various maritime offshore operations.
- Key international rules and regulations related to offshore operations.
- Assessment of strategic threats and possibilities for offshore industry stakeholders.

QUALITY ASSESSMENT METHODS:

Audits carried out by the University, audits of the teaching process carried out by the Faculty, student attendance records, data analysis and levels of satisfaction as per the certified quality system (Quality System Management, ISO 9001:2015).

PREPARED BY:	Prof. Dr. Danilo Nikolic, MSc Radmila Gagic, Dr. Jonida Salihila, Dr Theocharis Plomaritis
NOTE:	

Subject title	Fisheries management			
Subject code	**Subject status**	**Semester**	**ECTS**	**Class load**
	Elective	**III**	**10**	**2L+1E+1P**

STUDY PROGRAMMES FOR WHICH IT IS ORGANIZED:

Academic master degree program in Maritime environmental protection and management, 2 years, 120 ECTS

ADMISSION REQUIREMENT:

No prerequisites for course enrolment and attending

GOALS OF STUDY:

This module provides basic knowledge on the biology and population dynamics of fishery resources, on the selectivity of fishing gears and on the mapping of fishery resources. Students will acquire skills in assessment methods for the development and analysis of fisheries resources, always with a view to sustainable fisheries management. Students determine the status and productivity of a fishery resource and the impact of fishing on that resource and the environment. This module aims to develop some knowledge as real as possible of the state of exploitation and the evolution of the resource, by understanding the dynamics of the exploited populations. Case studies, recitations and recommendations are made by the students.

NAME AND SURNAME OF PROFESSOR AND ASSISTANT:

Dr. Ana Pesic,Dr. Aleksandar Joksimovic, Dr. Zdravko Ikica, Dr. Milica Mandic; Prof. Asoc. Erjola Keçi; PhD. Ina Nasto

TEACHING METHOD:

Lectures and debates.The course consists of lectures and discussion sessions. There is a large volume of reading, mostly from the scientific literature. Group work and presentations will be part of the teaching.
MEP&M digital learning platform will be used to perform the pedagogical process for students unable to attend specific lectures and in order to engage the students to partially perform their workload online. This means that additional learning material as well as (partially) recorded lectures and exercises in the electronic multimedia format will be available to students. In terms of teaching method when using MEP&M digital learning platform, student centered approaches will be fostered, so that students will actively engage with the material available online.

SUBJECT CONTENT:

Preparatory weeks	Preparation and semester enrolment
I week	Introduction to the Fisheries Management, development and history of fisheries and aquaculture
II week	Introduction to fisheries resources: species, stocks, recruitment, food webs
III week	General characteristics and types of fisheries: demersal, pelagic and small scale fisheries, Fishing gears and fishing fleet
IV week	Current state of fisheries resources: World, Mediterranean, Adriatic, shared stocks concept
V week	Impact of fishing on habitats and exploited populations: Discarded catch, By-catches, Overfishing, "Ecosystem approach to fisheries"
VI week	Concept of stock assessment: population characteristics, fishing effort, MSY
VII week	Statistics in fisheries management: hypothesis testing & modelselections
VIII week	Project presentation
IX week	General characteristics and types of mariculture.
X week	Impact of mariculture on the environment
XI week	Fisheries management measures: Fishing effort regulation, spatial and temporal closures, minimal landing size, fishing gears
XII week	Fisheries management measures: catch limitations, single and multispecies fisheries management
XIII week	Fisheries policy and legislation: EU, GFCM and regional
XIV week	Conservation and Fisheries economics
XV week	Project presentation

XVI week	**Final exam**
Final week	Semester verification and marks enrolment
XVIII-XXI week	Additional and remedial classes and corrective exam term

STUDENTS' WORKLOAD PER SUBJECT

Per week	**During semester**
10 credits x 40/30 = 13 hours + 20 minutes **Structure:** **2** hours of lectures **1** hour of exercise **1** hour of practical work **9** hours **20** minutes of individual work, including consultations	**Teaching and the Final Exam:** (13h + 20 min.) x 16 = 258h + 20 minutes **Necessary preparation before term starting** (admin., enrolment, verification): (13h + 20 min) x 2 = 26h + 40min **Total hours for the course:** 10 x 30 = 300h **Additional hours for preparing correction of final exam, including the taking of the exam:** 15h **Structure of the students' duties:** 258h + 20 min.(lectures) + 26h + 40min + 15h (additional work)

Students are obliged to attend lectures, take compulsory assignments and final exam.

LITERATURE:

1. Power point presentations.
2. Charis Galanakis, **Sustainable Fish Production and Processing**, 2021, Elsevier, ebook ISBN: 9780128242964
3. Asche, F. et al. (2018). **Three pillars of sustainability in fisheries**. Proceedings of the National Academy of Sciences 115: 11221-11225. (available online)
4. Costello, C., and Polasky, S., 2012. **Optimal harvesting of stochastic spatial resources**.Journal of Environmental Economics and Management 56.1: 1-18. (available online)
5. **EU Common Fisheries Policy** (EU CFP) (available online)
6. FAO (2020) **State of World Fisheries and Aquaculture**. Rome, FAO. http://www.fao.org/publications/sofia/2020/en/ (available online)
7. National Academies of Science, Engineering, and Medicine (NASEM). (2021) **Data and Management Strategies for Recreational Fisheries with Annual Catch Limits**. Washington, D.C.: The National Academies Press. (available online)
8. The World Bank, 2016. **Safety and Sustainability for Small-Scale Fishers**. (available online)
9. Cochrane, K.L., Garcia S.M., 2009. **A Fishery Manager's Guidebook**. The Food and Agriculture Organization of the United Nations and Wiley-Blackwell Publishing, (available online)
10. Garcia, S.M.; Zerbi, A.; Aliaume, C.; Do Chi, T.; Lasserre, G. **The ecosystem approach to fisheries. Issues, terminology, principles, institutional foundations, implementation and outlook.** FAO Fisheries Technical Paper. No. 443. Rome, FAO. 2003. 7 (available online)
11. Raykov, V. S., Ivanova, P. P., Turan, C., Duzgunes, E., eds. (2020). **Ecosystem Approach to Fisheries in the Mediterranean and Black Seas - Advances in Research and Technologies**. Lausanne: Frontiers Media SA. doi: 10.3389/978-2-88966-015-5 (available online)
12. Charles, T.,**Sustainable Fishery Systems**, Blackwell Science, ebook ISBN: 978-0-470-69823-5
13. Set of research papers.
14. Other related publications

METHODS OF KNOWLEDGE ASSESSMENT AND MARKING:

1. Project presentations, from 0 to 40 points;
2. Final exam, from 0 to 50 points;
3. Attendance and class activities, from 0 to 10 points;

Passing mark is awarded if the student collects more than 50 points.

SPECIAL NOTE FOR THE SUBJECT:

All activities will be conducted in English. Lectures and exercises will be partially recorded. Additional learning materials in the electronic format along with the recorded lectures and exercises will be uploaded to the MEP&M digital learning

platform, so that students will be able to follow attend the course from a distance.

EXPECTED LEARNING OUTCOMES:

Upon successful completion of the course, the student will be able to:

- Have knowledge on the biology and population dynamics of fishery resources,
- Select the appropriate fishing gears and on the mapping of fishery resources.
- Analyse fisheries resources
- Determine the status and productivity of a fishery resource and the impact of fishing on that resource and the environment.
- Have appropriate knowledge of EU Fishery policies and regulations

QUALITY ASSESSMENT METHODS ENSURING THE DESIRED LEARNING OUTCOMES:

Survey carried out by the University, List of student attendance, Teaching process monitored by the Faculty, Analysis of the examination passing rate (Quality Management System in compliance with ISO 9001)

DATA PREPARED BY:	Dr. Ana Pesic, Dr. Aleksandar Joksimovic, Dr. Zdravko Ikica, Dr. Milica Mandic; Prof. Asoc. Erjola Keçi; Dr. Ina Nasto
NOTE:	

Subject title	Integrated Coastal Zone Management			
Subject code	**Subject status**	**Semester**	**ECTS**	**Class load**
	Obligatory	**V**	**4**	**2L+1E+1P**

STUDY PROGRAMMES FOR WHICH IT IS ORGANIZED:

Academic Undergraduate Studies on Maritime Faculty, Study Programme Maritime Management and Logistics, 3 years (6 Terms), 180 ECTS credits

ADMISSION REQUIREMENT:

No prerequisites for course enrolment and attending

GOALS OF STUDY:

The course objective is to provide graduates with the scientific expertise required to successfully deal with problems related to Integrated Coastal Management, focusing on the ecological and physical processes, ecosystem degradation/restoration, the sustainable management of biological resources, Climate Change impact and geo-hazard risk assessments and the sustainable development of the Coastal Zone.

NAME AND SURNAME OF PROFESSOR AND ASSISTANT:

Dr. Milica Mandić, Dr. Ermal Xhelilaj, Dr. Vesna Mačić, Dr. Slađana Gvozdenović-Nikolić, Dr. Giorgio Anfuso, Dr. Tomás Fernández Montblanc, Dr. Javier Moreno-Andrés

TEACHING METHOD:

Lectures and debates. Preparation of one seminar paper on assigned topic, preparation for tests and final exam. Consultations.

MEP&M digital learning platform will be used to perform the pedagogical process for students unable to attend specific lectures and in order to engage the students to partially perform their workload online. This means that additional learning material as well as (partially) recorded lectures and exercises in the electronic multimedia format will be available to students. In terms of teaching method when using MEP&M digital learning platform, student centered approaches will be fostered, so that students will actively engage with the material available online.

SUBJECT CONTENT:

Preparatory weeks	Preparation and semester enrolment
I week	Introduction to the subject. Coastal zone definition, classification, and goals.
II week	Structural Elements and Processes of ICZM.
III week	Ecosystem Approach to ICZM.
IV week	Marine environment and ICZM.
V week	Coastal ecology and biodiversity.
VI week	Integrated planning on the example of fisheries and mariculture. Case analysis.
VII week	Scientific Research Methods and Tools for ICZM.
VIII week	Coastal oceanography and climate change.
IX week	Sustainable development and marine protection.
X week	Socio-economic indicators and Integrated Coastal Management.
XI week	Coastal risks assessment and management.
XII week	Marine Spatial planning.
XIII week	Geographic Information System (GIS) Applied to ICZM.
XIV week	Policies and regulations for coastal management (European approach; UNEP/MAP; ICZM protocol, EU recommendations)
XV week	Project presentation
XVI week	**Final exam**
Final week	Semester verification and marks enrolment
XVIII-XXI week	Additional and remedial classes and corrective exam term

STUDENTS' WORKLOAD PER SUBJECT

Per week	**During semester**

5 credits x 40/30 = 6 hours + 40 minutes **Structure:** **3** hours of lectures **1** hour of exercise **0** hour of practical work **2** hour **40** minutes of individual work, including consultations	**Teaching and the Final Exam:** 6h + 40 min. x 16 = 106h + 40 minutes **Necessary preparation before Term starting** (admin., enrolment, verification): 6h + 40 min x 2 = 13h + 20min **Total hours for the course:** 5 x 30 = 150h **Additional hours for preparing correction of final exam, including the taking of the exam:** 30h **Structure of the students' duties:** 106h + 40 min.(lectures) + 13h + 20min + 30h (additional work)

Students are obliged to attend lectures, take compulsory assignments and final exam.

LITERATURE:

1. Pourghasemi, Hamid Reza, **Spatial Modeling in GIS and R for Earth and Environmental Science**, 2019, Elsevier, ebook ISBN: 9780128152263
2. Ellis, Jean, **Coastal and Marine Hazards Risks and Disasters**, 2014, Elsevier, ebook ISBN: 9780123964830
3. Zanuttigh, Barbara, **Coastal Risk Management in a Changing Climate**, 2014, Elsevier, ebook ISBN: 9780123973108
4. Ramkumar, Mu, **Coastal Zone Management**, 2018, Elsevier, ebook ISBN: 9780128143506
5. David R. Green, Jeffrey L. Payne, **Marine and Coastal Resource Management: Principles and Practice**, 2017, Taylor&Francis, ebook ISBN: 9780203127087
6. UN Environment (2018). **Conceptual guidelines for the application of Marine Spatial Planning and Integrated Coastal Zone Management approaches to support the achievement of Sustainable Development Goal Targets 14.1 and 14.2**. UN Regional Seas Reports and Studies No. 207. 58pp (available online)
7. Ramieri, E., Bocci, M., Markovic, M. (2019). **Linking Integrated Coastal Zone Management to Maritime Spatial Planning: The Mediterranean Experience.** In: Zaucha, J., Gee, K. (eds) Maritime Spatial Planning. Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-319-98696-8_12 (available online)
8. UNEP/MAP-PAP/RAC and MESPU (2021). **Land Sea Interactions Analysis for Montenegro**. Authors: Mlakar Aleš, Cigoj Sitar Nika. Ed: PAP/RAC – GEF Adriatic project. Pp. 74 (available online)
9. Macias, J.C., Avila Zaragozá, P., Karakassis, I., Sanchez-Jerez, P., Massa, F., Fezzardi, D., Yücel Gier, G., Franičević, V., Borg, J.A., Chapela Pérez, R.M., Tomassetti, P., Angel, D.L., Marino, G., Nhhala, H., Hamza, H., Carmignac, C. & Fourdain, L. 2019. **Allocated zones for aquaculture: a guide for the establishment of coastal zones dedicated to aquaculture in the Mediterranean and the Black Sea**. General Fisheries Commission for the Mediterranean. Studies and Reviews. No 97. Rome, FAO. 90 pp. (available online)
10. Cullinan, C. (2006). Integrated coastal management law: Establishing and strengthening national legal frameworks for integrated coastal management. FAO Legislative Study. 274 p. (available online)

METHODS OF KNOWLEDGE ASSESSMENT AND MARKING:

1. Project presentations, from 0 to 40 points;
2. Final exam, from 0 to 50 points;
3. Attendance and class activities, from 0 to 10 points;

Passing mark is awarded if the student collects more than 50 points.

SPECIAL NOTE FOR THE SUBJECT:

All activities will be conducted in English. Lectures and exercises will be partially recorded. Additional learning materials in the electronic format along with the recorded lectures and exercises will be uploaded to the MEP&M digital learning platform, so that students will be able to follow attend the course from a distance.

EXPECTED LEARNING OUTCOMES:

Upon successful completion of the course, the student will be able to understand basic principles of:

- The coastal and marine physical, chemical and biological processes; the sustainable management of living resources, with a particular focus on fisheries and aquaculture;
- Geographic information systems (GIS), basic knowledge and implementation for the ICZM

- Basic information about ecological processes in coastal/marine ecosystems, with a focus on eutrophication, biodiversity, primary production, marine food web analysis, and population dynamics;
- ICZM international and european policies and regulation and environmental impact assessment techniques.
- Use of modern environmental data processing methods and multi-criteria methodologies as decision-making tools;
- The planning of the integrated management of coastal areas and river basins, through modelling and the application of novel methods and techniques;
- The risk assessment of coastal infrastructure.
- Tackling the challenges posed by coastal management.

QUALITY ASSESSMENT METHODS ENSURING THE DESIRED LEARNING OUTCOMES:

Survey carried out by the University, List of student attendance, Teaching process monitored by the Faculty, Analysis of the examination passing rate (Quality Management System in compliance with ISO 9001)

DATA PREPARED BY:	Dr. Milica Mandić, Dr. Ermal Xhelilaj, Dr. Vesna Mačić, Dr. Giorgio Anfuso, Dr. Tomás Fernández Montblanc, Dr. Javier Moreno-Andrés
NOTE:	

Subject title	Management of Protected Marine Areas and Species			
Subject code	**Subject status**	**Semester**	**ECTS**	**Class load**
	Elective	**III**	**10**	**2L+2E+0P**

STUDY PROGRAMMES FOR WHICH IT IS ORGANIZED:

Academic master degree program in Maritime environmental protection and management, 2 years, 120ECTS .

ADMISSION REQUIREMENT:

No prerequisites for course enrolment and attending

GOALS OF STUDY:

Threat assessment systems for marine species are discussed in this module, including the IUCN Red List of Threatened Species and the Green List of Protected and Conserved Areas. The various protection instruments are detailed, including the marine protected area networks, Natura 2000, the OSPAR networks, and the UNEP SPAMI list, Barcelona Convention, Bern Convention, CITES Convention, ACCOBAMS. A description of the MPA governance framework (European framework) is proposed and the place of MPA protection in the Marine Strategy Framework Directive (MSFD) and in Marine Spatial Planning (MSP) is discussed. Finally, students reflect on the establishment of MPA management plans through case studies.

NAME AND SURNAME OF PROFESSOR AND ASSISTANT:

Dr. Vesna Mačić, Dr. Ana Pesic, Dr. Slavica Petovic, Prof. Asoc. Erjola Keci, Prof.Asoc. Denada Sota, Dr.Miriam Hampel

TEACHING METHOD:

Lectures and debates. Readig mostly of scientific literature and practical examples. Group work and presentations will be part of the teaching. Consultations.

MEP&M digital learning platform will be used to perform the pedagogical process for students unable to attend specific lectures and in order to engage the students to partially perform their workload online. This means that additional learning material as well as (partially) recorded lectures and exercises in the electronic multimedia format will be available to students. In terms of teaching method when using MEP&M digital learning platform, student centered approaches will be fostered, so that students will actively engage with the material available online.

SUBJECT CONTENT:

Preparatory weeks	Preparation and semester enrolment
I week	Introduction to the subject - Marine biodiversity and treats; benefits of MPAs
II week	Protected species; Assessment of IUCN status; International and National Red lists; EU Biodiversity Strategy
III week	National and international framework for MPAs; International conventions (Bern, Barcelona, CITES, ACCOBAMS,…), GFCM, etc.
IV week	MSP and MSFD; Ecosystem based approach in planning of MPAs; EU Sustainable Development Goals
V week	Identifying targets for protection; Involvement of relevant stakeholders
VI week	Treats identification and prioritization; Identifying site strengths and weaknesess (SWOT analyses)
VII week	Developing management actions; conflict resolution
VIII week	Understanding fisheries and fisheries economics; Impacts on fisheries and impacts from fisheries
IX week	Impacts to MPAs, prevention and control actions
X week	Concept of MPAs zoning and zoning importance for the Management of MPAs;
XI week	Tourism in MPAs; Impacts and sustainable tourism planning
XII week	Educating local tour operators and visitors; Green certification; Zoning for tourism
XIII week	Different methodologies for monitoring of marine environment in the MPAs
XIV week	Restoration and adaptive management
XV week	Global environmental changes and MPAs
XVI week	**Final exam**

Final week	Semester verification and marks enrolment
XVIII-XXI week	Additional and remedial classes and corrective exam term

STUDENTS' WORKLOAD PER SUBJECT

Per week	**During semester**
10 credits x 40/30 = 13 hours + 20 minutes **Structure:** **2** hours of lectures **2**hour of exercise **0** hour of practical work **9**hour **20** minutes of individual work, including consultations	**Teaching and the Final Exam:**(13h + 20 min.) x 16 = 258h + 20 minutes **Necessary preparation before Term starting** (admin., enrolment, verification): (13h + 20 min) x 2 = 26h + 40min **Total hours for the course:** 10 x 30 = 300h **Additional hours for preparing correction of final exam, including the taking of the exam:** 15h **Structure of the students' duties:** 258h + 20 min.(lectures) + 26h + 40min + 15h (additional work)

Students are obliged to attend lectures, take compulsory assignments and final exam.

LITERATURE:

1. PPT presentations.
2. Tempesta M., del Mar Otero M. 2013. **Guide for quick evaluation of management in Mediterranean MPAs**. 2013 WWF-Italy, International Union for Conservation of Nature and Natural Resources (IUCN) 2013. (available online)
3. PatriceGuillotreau, AlidaBundy, R. Ian Perry, **Global Change in Marine Systems: Societal and Governing Responses**, 2019, Taylor&Francis, ebook ISBN:9781315163765
4. John Humphreys, Robert Clark, **Marine Protected Areas, Science, Policy and Management**, Elsevier, 2019, eBook ISBN: 9780081026991
5. International conventions and national legislation
6. Collection of research papers

METHODS OF KNOWLEDGE ASSESSMENT AND MARKING:

1. Attendance and activity in classes, from 0 to 10 points.
2. Practical work on excersizes - from 0 to 30 points.
3. Final exam, from 0 to 60 points.

Passing mark is awarded if the student collects more than 50 points.

SPECIAL NOTE FOR THE SUBJECT:

All activities will be conducted in English. Lectures and exercises will be partially recorded. Additional learning materials in the electronic format along with the recorded lectures and exercises will be uploaded to the MEP&M digital learning platform, so that students will be able to follow attend the course from a distance.

EXPECTED LEARNING OUTCOMES:

Upon successful completion of the course, the student will be able to:

- Demonstrates a knowledge and understanding of the national and international legal framework on protected species
- Perform assessment of the main treats to the marine environment and prioritize management actions
- Understand zoning of MPA and its importance for the MPA management
- Understand Impacts on fsisheries and impacts from fisheries as well as provide planning for sustainable fishery
- Identify impact from tourism and plan how to develop sustainable tourism in the MPA
- Identify other MPAs impacts and control&prevention action
- Will be familarized with main monitoring methodologies
- Will be aware of the needs for MPA planning and management

QUALITY ASSESSMENT METHODS ENSURING THE DESIRED LEARNING OUTCOMES:

Survey carried out by the University, List of student attendance, Teaching process monitored by the Faculty, Analysis of

the examination passing rate (Quality Management System in compliance with ISO 9001)	
DATA PREPARED BY:	Dr. Vesan Mačić, Dr. Ana Pesic, Dr. Milica Mandic, Dr. Slavica Petovic, Prof. Asoc. Erjola Keci, Prof. Asoc. Denada Sota
NOTE:	

Subject title	Maritime Safety and Security			
Subject code	**Subject status**	**Semester**	**ECTS**	**Class load**
	Obligatory	**I**	**10**	**2L+2E+0P**

STUDY PROGRAMMES FOR WHICH IT IS ORGANIZED:

Academic master's degree program in Maritime environmental protection and management, 2 years, 120 ECTS

ADMISSION REQUIREMENT:

No prerequisites for course enrolment and attending

GOALS OF STUDY:

The development of blue growth and in particular maritime navigation must be based on the assurance of a secure maritime space. This module focuses on the globalization of maritime transport. The international conventions are explained, such as MARPOL, SOLAS, MLC, STCW and CLC. The opposition between traditional and open registries (flag of convenience) are discussed, as well as the role of classification societies, the notion of flag state versus port state and port state control. Case studies, recitations and recommendations are made by the students.

NAME AND SURNAME OF PROFESSOR AND ASSISTANT:

Prof. Dr Osman Metalla, Prof. Dr. Spiro Ivosević, MSc Miroslav Vukicevic, Dr. Ermal Xhelilaj

TEACHING METHOD:

Lectures and debates. Preparation of one seminar paper on assigned topic, preparation for tests and final exam. Work on simulator. Consultations.

MEP&M digital learning platform will be used to perform the pedagogical process for students unable to attend specific lectures and in order to engage the students to partially perform their workload online. This means that additional learning material as well as (partially) recorded lectures and exercises in the electronic multimedia format will be available to students. In terms of teaching method when using MEP&M digital learning platform, student centered approaches will be fostered, so that students will actively engage with the material available online.

SUBJECT CONTENT:

Preparatory weeks	Preparation and semester enrolment
I week	Introduction to maritime safety. Rules of the International Maritime Organization. Maritime Administration. Port State and Flag State control. Classification Societies.
II week	International Convention for the Safety of Life at Sea (SOLAS), 1974.
III week	International Convention for The Prevention of Pollution from Ships (MARPOL).
IV week	International Convention for Standards of Training, Certification and Watch keepingfor Seafarers (STCW).
V week	Maritime Labour Convention, 2006 (MLC).
VI week	International Convention on Facilitation of International Maritime Traffic (FAL Convention): health in ports.
VII week	Search and Rescue (SAR): Global Maritime Distress and Safety System.
VIII week	Maritime Traffic Control System.
IX week	International Mobile Satellite Organization (IMSO).
X week	Maritime spaces in the United Nations Convention on the Law of the Sea (UNCLOS): special reference to the high seas.
XI week	Maritime security.
XII week	*International* Ship and Port facility Security Code (ISPS CODE).
XIII week	Illicit trafficking.
XIV week	Contemporary Maritime Piracy.
XV week	Effective Maritime and Port Security.
XVI week	**Final Exam**
Final week	Semester verification and marks enrolment
XVIII-XXI week	Additional and remedial classes and corrective exam term

STUDENTS' WORKLOAD PER SUBJECT

Per week	During semester
10 credits x 40/30 = 13 hours + 20 minutes **Structure:** **2** hours of lectures **1** hour of exercise **1**hour of practical work **9**hours **20** minutes of individual work, including consultations	**Teaching and the Final Exam:** (13h + 20 min.) x 16 = 258h + 20 minutes **Necessary preparation before term starting** (admin., enrolment, verification): (13h + 20 min) x 2 = 26h + 40min **Total hours for the course:** 10 x 30 = 300h **Additional hours for preparing correction of final exam, including the taking of the exam:** 15h **Structure of the students' duties:** 258h + 20 min.(lectures) + 26h + 40min + 15h (additional work)

Students are obliged to attend lectures, take compulsory assignments and final exam.

LITERATURE:

1. Spiro Ivosevic, Osman Metalla , Ermal Xhelilaj lecturing materials
2. ILO Code of safe practice. ISBN 978922129959-2
3. IMO International Conventions
4. Different IMO materials regarding safety and security
5. Wayne K. Talley: Maritime Safety, Security and Piracy (The Grammenos Library), Informa low from Routledge,2014
6. Malcolm D. Evans: Maritime Security and the Law of the Sea, Edward ELGAR Publishing 2020.
7. James Kraska: Contemporary Maritime Piracy, International Low, Strategy, and Diplomacy at Sea, Praeger, 2011.
8. Natalie Klein: Maritime Security and the Law of the Sea, Oxford University Press; Reprint edition, 2013
9. Michael Edgerton: A Practitioner's Guide to Effective Maritime and Port Security, Wiley, 2013.
10. Maritime Security: An Introduction by Michael McNicholas, Elsevier 2016.
11. Anna Sergi: Ports, Crime and Security, Bristol University Press, 2021.
12. Hermendra Malik, Security and Safety in Cruise Tourism, Anmol Publications PVT. Ltd, 2012

METHODS OF KNOWLEDGE ASSESSMENT AND MARKING:

1. Attendance and activity in classes, from 0 to 10 points.
2. Practical work on excersizes - from 0 to 30 points.
3. Final exam, from 0 to 60 points.

Passing mark is awarded if the student collects more than 50 points.

SPECIAL NOTE FOR THE SUBJECT: All activities will be conducted in English. Lectures and exercises will be partially recorded and uploaded on the Distance Learning (DL) platform so that students may follow along from a distance.

EXPECTED LEARNING OUTCOMES:

Upon successful completion of the course, the student will be able to:

- Demonstrates a knowledge and understanding of main international IMO conventions.
- Role of the maritime administrations (port state and flag state) in the safety rules monitoring and enforcement
- Have knowledge of port works and best safety practices to increase the safety in the port operations.
- Know and interpret the basic principles of the UNCLOS regarding security and ocean exploitation.
- Understand main security threats in ship and port environment and be able to manage the security challenges.
- Understand main ISPS requirements.
- Demonstrate knowledge about varieties of transnational crimes in the maritime domain
- Understood effective maritime and Port security measures

QUALITY ASSESSMENT METHODS ENSURING THE DESIRED LEARNING OUTCOMES:

Survey carried out by the University, List of student attendance, Teaching process monitored by the Faculty, Analysis of the examination passing rate (Quality Management System in compliance with ISO 9001)

DATA PREPARED BY:	Prof. Dr. Osman Metalla, Prof. Dr. Spiro Ivosević,
NOTE:	

Subject title	Entrepreneurship and blue innovation			
Subject code	**Subject status**	**Semester**	**ECTS**	**Class load**
	Elective	**III**	**10**	**2L+1E+1P**

STUDY PROGRAMMES FOR WHICH IT IS ORGANIZED:

Academic master degree program in Maritime environmental protection and management, 2 years, 120 ECTS

ADMISSION REQUIREMENT:

No prerequisites for course enrolment and attending

GOALS OF STUDY:

The emergence of blue growth requires innovation, and therefore entrepreneurship. This module aims to provide the necessary skills to identify and evaluate business opportunities in sectors such as aquaculture, fishing, offshore industries, shipping, biotechnology, or tourism. It should also enable students to identify and evaluate public and private resources available for the development of a start-up, and to apply the knowledge acquired to the development of an innovative project. Putting all these issues into perspective requires developing an awareness of the environmental and social issues that arise from maritime activities. These skills are relate to proactiveness, opportunity oriented, value creation, customer intensity, innovation, risk management, resource leveraging.

NAME AND SURNAME OF PROFESSOR AND ASSISTANT:

Dr. Maja Skuric, MSc Radmila Gagic, Prof. Dr. Senka Sekularac Ivosevic; Prof. Dr. Klodiana Gorica; Dr. Llambi Prendi

TEACHING METHOD:

Lectures and debates. The course consists of lectures and discussion sessions. There is a large volume of reading, mostly from the scientific literature. Group work and presentations will be part of the teaching.
MEP&M digital learning platform will be used to perform the pedagogical process for students unable to attend specific lectures and in order to engage the students to partially perform their workload online. This means that additional learning material as well as (partially) recorded lectures and exercises in the electronic multimedia format will be available to students. In terms of teaching method when using MEP&M digital learning platform, student centered approaches will be fostered, so that students will actively engage with the material available online.

SUBJECT CONTENT:

Preparatory weeks	Preparation and semester enrolment.
I week	Introduction to subject.
II week	Entrepreneurship, opportunity and innovation Aproach @ Blue Economy sectors.
III week	Ideation and Problem Solving.
IV week	Selling the Idea.
V week	Business Model Generation.
VI week	Product Positioning, Development and Launching.
VII week	Entrepreneurial Marketing.
VIII week	Finance and Funding.
IX week	Entrepreneurial Company growth Strategies.
X week	Dimensions of Entrepreneurial Marketing.
XI week	Leadership applied to entrepreneurs.
XII week	Opportunities process development in Blue Economy Business.
XIII week	Innovation strategies for new business.
XIV week	Intellectual property rights (IPR).
XV week	Team project presentations.
XVI week	**Final exam.**
Final week	Semester verification and marks enrolment.
XVIII-XXI week	Additional and remedial classes and corrective exam term.

STUDENTS' WORKLOAD PER SUBJECT

Per week	**During semester**

10 credits x 40/30 = 13 hours + 20 minutes **Structure:** **2** hours of lectures **1** hour of exercise **1** hour of practical work **9** hours **20** minutes of individual work, including consultations	**Teaching and the Final Exam:** (13h + 20 min.) x 16 = 258h + 20 minutes **Necessary preparation before term starting** (admin., enrolment, verification): (13h + 20 min) x 2 = 26h + 40min **Total hours for the course:** 10 x 30 = 300h **Additional hours for preparing correction of final exam, including the taking of the exam:** 15h **Structure of the students' duties:** 258h + 20 min.(lectures) + 26h + 40min + 15h (additional work)

Students are obliged to attend lectures, take compulsory assignments and final exam.

LITERATURE:

1. Gorica Klodiana, Pegi 2017: "Entrepreneurial Marketing"
2. Lourdes Casanova, Peter Cornelius, Soumitra Dutta. **Financing Entrepreneurship and Innovation in Emerging Markets**. Elsevier. 2017. eBook ISBN: 9780128040263
3. Galanakis, Charis, **Innovation Strategies in Environmental Science**, 2019, Elsevier, ebook ISBN: 9780128173824
4. RajatKantiBaisya,**Managing Start-ups for Success: Entrepreneurship in Difficult Times**, 2021, Taylor&Francis, ebook ISBN: 9781003002574
5. European Commission (2020). **The EU Blue Economy Report 2020**. Publications Office of the European Union. (available online)
6. World Bank and United Nations Department of Economic and Social Affairs (2017). **The potential of the Blue Economy.** World Bank. (available online)
7. Tom Harris (2019). **Start-up. A Practical Guide to Starting and Running a New Business**. 2nd edition. ISBN 9783319945477.E-book. Springer.

METHODS OF KNOWLEDGE ASSESSMENT AND MARKING:

1. Project presentations, from 0 to 40 points;
2. Final exam, from 0 to 50 points;
3. Attendance and class activities, from 0 to 10 points;

Passing mark is awarded if the student collects more than 50 points.

SPECIAL NOTE FOR THE SUBJECT:

All activities will be conducted in English. Lectures and exercises will be partially recorded. Additional learning materials in the electronic format along with the recorded lectures and exercises will be uploaded to the MEP&M digital learning platform, so that students will be able to follow attend the course from a distance.

EXPECTED LEARNING OUTCOMES:

Upon successful completion of the course, the student will be able to:

- Assess a business issue and formulate solutions,
- Create a business plan from an opportunity arising from marine/maritime and coastal resources,
- Be able to launch a start-up and anticipate the risks they could face,
- To understand the importance of entrepreneurship and marketing approach today's blue innovation, Be able make a positioning plan for extended value,
- Identify roles and understand the process of innovation development,
- Understand the role of innovations as a competitive advantage.

QUALITY ASSESSMENT METHODS ENSURING THE DESIRED LEARNING OUTCOMES:

Audits carried out by the University, audits of the teaching process carried out by the Faculty, student attendance records, data analysis and levels of satisfaction as per the certified quality system (Quality System Management, ISO 9001:2015).

DATA PREPARED BY:	Prof. Dr. Klodiana Gorica; Dr Maja Skuric, MSc Radmila Gagic, Dr. Llambi Prendi
NOTE:	