

# Minor in Blue Economy and Growth

Courses' Catalogue 2024-25



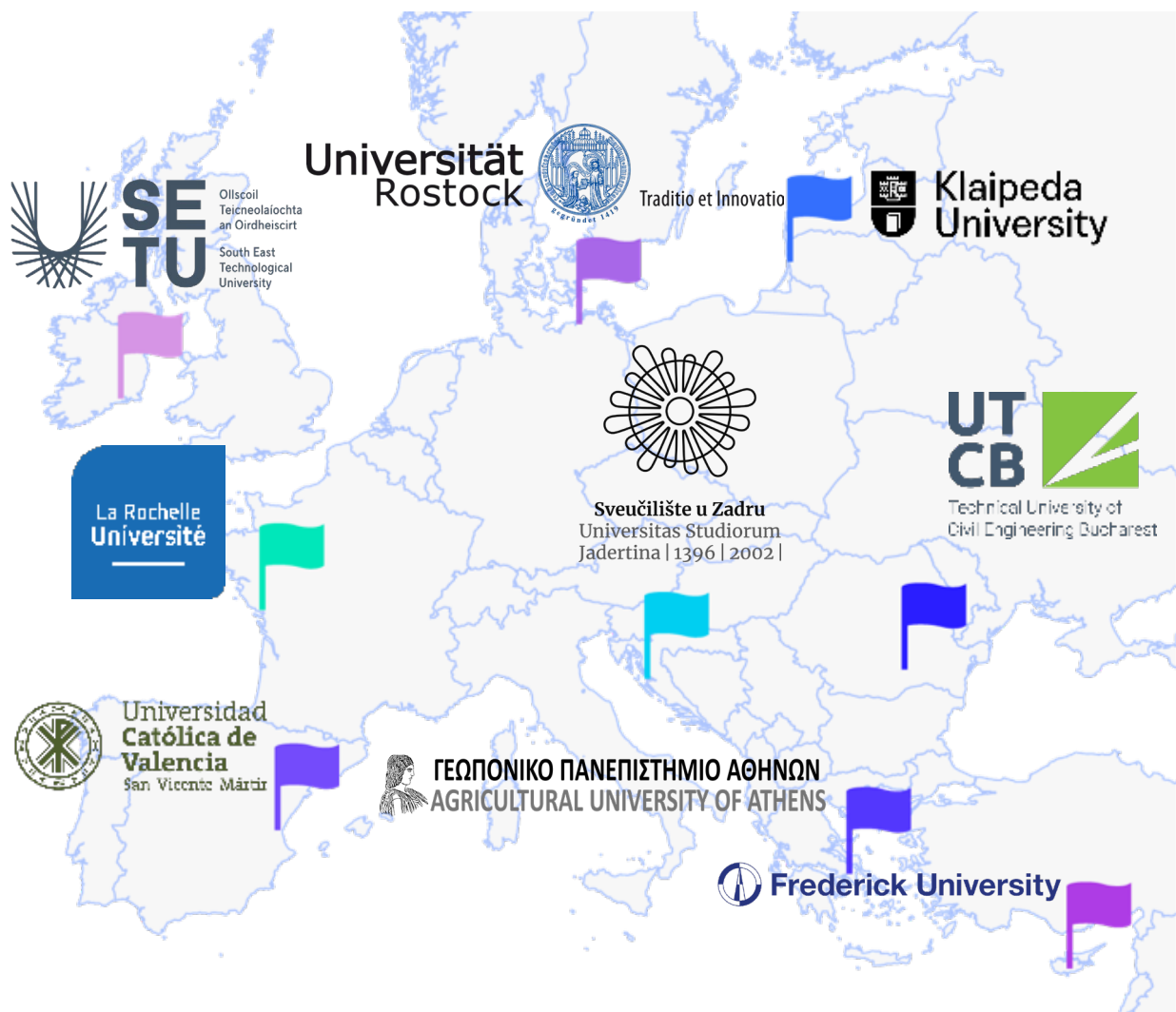
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Erasmus+ Programme  
of the European Union

# Your university at EU-CONEXUS

The European University for Smart Urban Coastal Sustainability (EU-CONEXUS) is a transnational European higher education and research institution that covers the smart urban sustainable coastal development from a global point of view.

EU-CONEXUS is formed by 9 European universities, which are located in Croatia, Greece, France, Lithuania, Romania, Spain, Ireland, Germany and Cyprus:

- University of Zadar (UNIZD),
- Agricultural University of Athens (AUA),
- La Rochelle Université (LRUniv),
- Klaipeda University (KU),
- Technical University of Civil Engineering Bucharest (UTCB),
- Universidad Católica de Valencia (UCV),
- University of Rostock (UROS),
- South East Technological University (SETU),
- Frederick University (FredU).



EU-CONEXUS has chosen a focus on urban and semi-urban coastlines because they are increasingly densely populated areas and very important for trade, aquaculture and fisheries, energy, tourism. At the same time, these coastlines are the most vulnerable areas with regard to the consequences of climate change.

Universities and research institutions have a central role to play in promoting the 'Blue Economy' and 'Blue Growth' and to contribute to the skills and competences of the graduates who can work in a complex and challenging labour market. New approach is needed with regard to the organisation of studies and research therefore, 9 universities joined together to merge their strength and know-how in interdisciplinary short-term and degree programmes and to offer the students to study at international inter-campus European University.

Studying at any of above-mentioned university, you can also study at EU-CONEXUS. Choose international courses, joint short-term and degree programmes, benefit from academic and cultural exchange, and receive not only up-to-market knowledge and competences but also enriched curricula, which will be reflected in your European degree and Diploma Supplement.

## EU-CONEXUS OPENS UP OPPORTUNITIES TO INTERNATIONAL CURRICULA, CAREER AND EXPERIENCE



# What is Minor and how it is compatible with your Bachelor's study programme

EU-CONEXUS Minor programmes are one of these options to construct flexible, international, multidisciplinary curricula and to receive up-to-date competences that are highly required in the labour market. The 9 EU-CONEXUS universities created international joint Minor programmes, which you can choose studying Bachelor's at your university.

Minor's programme (sometimes called specialisation) is a specific interdisciplinary set of courses in the same or different field of studies, that you can select freely and make up your own set choosing 30 ECTS throughout your studies (for example, one course during one semester parallel to other courses of your chosen study programme).

- Depending on your study programme, you can choose Minor programme **as a part** or **additionally** to your study curricula.
- EU-CONEXUS Minor programme consists of **five sectors**; each of them offers several courses that you may choose from.

**In order to receive Minor's certificate,** you must have taken **30 ECTS** from:

- minimum 2 different sectors;
- 3 different (one could be yours) EU-CONEXUS universities,
- 5 courses in total, maximum 2 courses from your home university

At the end of your Bachelor's studies you will be awarded with Minor's certificate, and all the courses will be included in your Diploma Supplement.

If you do not wish to attend the full Minor's programme, you can always choose only the courses that interest you and enjoy some of the benefits of the EU-CONEXUS experience and to have them listed in your Diploma Supplement<sup>1</sup>.

EU-CONEXUS Minor's programme is also an **academic exchange** experience. Choosing any of EU-CONEXUS courses you will be studying with classmates from different universities in Europe and will gain not only knowledge but also learn about different cultures, languages, markets and gain intercultural experience and improve your English language skills. Each EU-CONEXUS course is considered as academic exchange (similar to Erasmus+) and will be included in the Diploma Supplement to prove your international curriculum.

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<sup>1</sup> Minor's certificate will be awarded **only** to the students who follow the general requirements of Minor's.

# Minor in Blue Economy and Growth

EU-CONEXUS invites all students of Bachelor's to shape freely their study programmes and to choose the Minor in Blue Economy and Growth.

Seas and oceans are drivers for our economy and have great potential for innovation and growth. Blue economy promotes a sustainable use of ocean resources for economic growth while preserving the health of ocean ecosystems.

The EU-CONEXUS Minor in Blue Economy and Growth provides you competences and professional skills related to the main industrial and service sectors of the blue economy, which are among the main established and emerging economic maritime sectors:

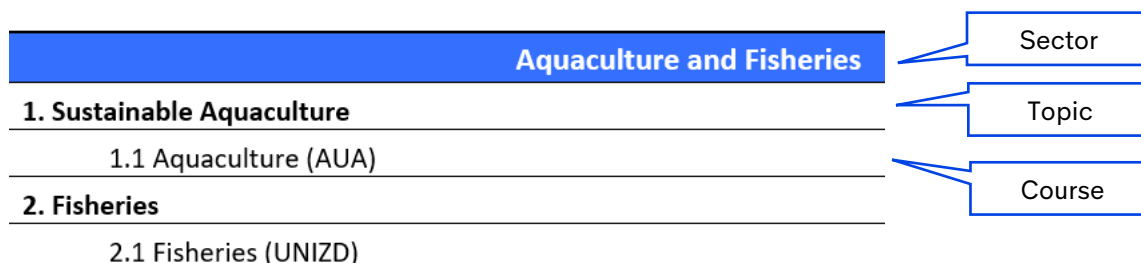
- Aquaculture and Fisheries
- Marine Biotechnology
- Ocean Energy
- Transport and Shipbuilding
- Coastal and Maritime Tourism

The learning outcomes of this minor will be achieved under practical and professional activities.

[Shape your Minor and enrich your knowledge and proficiency in Sustainable Blue Economy!](#)

# How to choose sectors and courses

- **Choose the sectors.** Sectors are the areas into which the Minor's programme is divided. The Minor's programme consists of 5 thematic areas (sectors) into which the Minor of Blue Economy and Growth is focused. You can choose freely the sectors of your interest or the most relevant to your Bachelor's studies. To receive Minor's certificate you must have chosen courses from minimum 2 sectors by the end of your Bachelor's studies.
- **Choose the topic.** Topic is a field of study that could be comprised by 1 (then the title matches with the title of the course) or more courses with similar or compatible contents. Each sector consists of 3 topics, 15 topics in total. Number of topics you choose has no effect to receive Minor's certificate.
- **Choose the courses.** Course refers to a series of lectures, discussions, or other lectures in a particular subject. Course lasts one academic term and is measured in European credits (ECTS). All EU-CONEXUS Minor's courses consist of 6 ECTS and are taught in *English*. You can choose 1-2 courses per semester (consult with the coordinator at your university). Pay attention in which semester, by which university the course is offered and read the prerequisites to be eligible to study the course. The course may be taught only virtually where you will be studying with the classmates from 6 different universities, or to include short term academic exchange at the university which offers this course when you can meet all the teachers and classmates in real life (blended) ([see Appendix 1](#)). To receive Minor's certificate you must have chosen courses from minimum 3 different universities (one of them could be your university) by the end of your Bachelor's studies.
- *Remember:* The Minor's courses can be part of your predefined study programme or extra 'optional' courses.
- You can join the Minor's programme starting from any semester. The first intake is spring semester of 2020/2021. Just note, if you take 1 course per semester, you will need 5 semesters to gather required 30 ECTS of the Minor's programme. [Sign up NOW !](#)



# How to apply

Minor courses can be offered by your home university or any other EU-CONEXUS university. All you need to do is to choose the courses and fill in the application at your home university.

Please check your university's website or contact Minor Officer at your university for more details. One thing we can assure: the procedure is simple, and paperwork is minimal, while Minor Officer will always consult and help you with everything.

## Contacts of Minors' officers

University	Name	Surname	E-mail address
UCV	Malgorzata	Musinska	<a href="mailto:malgorzata.musinska@ucv.es">malgorzata.musinska@ucv.es</a>
AUA	Olga	Ntanti	<a href="mailto:ntolga@aua.gr">ntolga@aua.gr</a>
LRUniv	Stephanie	Chiron	<a href="mailto:stephanie.chiron@univ-lr.fr">stephanie.chiron@univ-lr.fr</a>
UTCB	Ramona	Diac	<a href="mailto:ramona.diac@utcb.ro">ramona.diac@utcb.ro</a>
KU	Ingrida	Rukavice	<a href="mailto:ingrida.rukavice@ku.lt">ingrida.rukavice@ku.lt</a>
UNIZD	Ljerka	Morović	<a href="mailto:lmorovic@unizd.hr">lmorovic@unizd.hr</a>
UROS	International Office		<a href="mailto:minor.eu-conexus@uni-rostock.de">minor.eu-conexus@uni-rostock.de</a>
SETU	Nabla	Kennedy	<a href="mailto:nkennedy@wit.ie">nkennedy@wit.ie</a>
FU	Varnavas	Mytilineos	<a href="mailto:ad.mv@frederick.ac.cy">ad.mv@frederick.ac.cy</a>

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# Sectors and courses

## Aquaculture and Fisheries

### 1. Sustainable Aquaculture

[1.2 Aquaculture \(AUA\)](#)

### 2. Fisheries

[2.1 Fisheries \(UNIZD\)](#)

## Marine Biotechnology

### 4. Blue Biomass Applications

[4.3. Blue Biomass from obtention to application \(LRUniv\)](#)

### 5. Biotechnology of Marine Bioactive Molecules

[5.1. Biotechnology and Nanobiotechnology of Marine Bioactive Molecules \(AUA\)](#)

[5.2. Marine Biotechnology \(UCV\)](#)

### 6. Microbial Nanobiotechnology

[6.1. Introduction to Microbial Biotechnology \(UNIZD\)](#)

[6.2. Enzymes and Microbes as Tools for Blue Biotechnology \(LRUniv\)](#)

[6.3. Modern and innovative insight on industrial microbiology and biotechnology \(LRUniv\)](#)

## Ocean energy

### 7. Bioenergy and Waste to Energy

[7.1 Bioenergy and Waste to Energy \(UROS\)](#)

### 8. Energy from Renewable Resources I (wind, waves, tidal, currents)

[8.1 Energy from Renewable Resources I \(wind, waves, tidal, currents\) \(UTCB\)](#)

### 9. Energy from Renewable Resources II (solar, hydrothermal, biomass, osmotic, OTEC)

[9.1 Energy from Renewable Resources II \(solar, hydrothermal, biomass, osmotic, OTEC\) \(UTCB\)](#)

## Transport and Shipbuilding

### 10. Sustainable Development of the Maritime Economy

[10.1 Sustainable Development of the Maritime Economy \(KU\)](#)

### 11. Basics of Green Shipping

[11.2 Energy transition in shipping: Liquid Natural Gas \(KU\)](#)

### 12. Sustainable Transport Engineering for Coastal Region

[12.3. Sea Transport Development and Logistics \(KU\)](#)

## Coastal and Maritime Tourism

### 13. Sustainable Tourism Development

[13.1. Sustainable Tourism Development \(AUA\)](#)

[13.2. Sustainable Tourism Development \(KU\)](#)

### 14. Entrepreneurship, Creativity and Innovation Management

[14.1. Entrepreneurship \(AUA\)](#)

[14.2. Entrepreneurship \(UNIZD\)](#)

[14.3. Creativity and Innovation Management \(UCV\)](#)

[14.4. Entrepreneurship and innovation around sustainable tourism \(LRUniv\)](#)

### 15. Introduction to Underwater Archaeology

[15.1 Introduction to Underwater Archaeology \(UNIZD\)](#)

**16. Sustainable Blue Economy**

[16.1 Introduction to Environmental and Resource Economics \(UROS\)](#)

[16.2 Environmental Economics \(LRUniv\)](#)

[16.3 Ocean governance and blue economy \(LRUniv\)](#)



## Aquaculture and Fisheries Sector

Aquaculture is the farming of finfish, shellfish and aquatic plants. Aquaculture is one of the world's fastest growing food sectors that already provides the planet with about half of all the fish consumed. In Europe, aquaculture accounts for about 20% of fish production and is known for its high quality, sustainability and consumer protection standards. The sector is mainly composed of SMEs or micro-enterprises in coastal and rural areas. In fisheries, the goal is to foster a dynamic fishing industry and to maximise catches, but also to ensure a fair standard of living for fishing communities. We need to make sure that fishing practices do not harm the ability of fish populations to reproduce, by making fishing fleets more selective and by eliminating the practice of discarding unwanted or undersized fish.

The academic offer of the Aquaculture and Fisheries sector will, therefore, provide you with knowledge in aquaculture methods, systems and species, as well as in the identification, conservation and exploitation of marine resources. The aim is to acquire the necessary expertise to manage aquaculture farms and fish stocks, to ensure the sustainability of

aquaculture and fisheries and finally to recognise the environmental and socio-economic implications of the activities in this sector.

To learn more and gain the competences in Aquaculture and Fisheries we recommend to choose from the following **courses**:

Sector	Topic	Course	Semester	ECTS	University
Aquaculture and Fisheries	1. Sustainable Aquaculture	1.2. Aquaculture	Autumn	6	AUA
	2. Fisheries	2.1 Fisheries	Autumn	6	UNIZD

### Employability

Aquaculture enterprises, Aquafeed industry, Fishing fleet, Seafood value chain (including processing, exporting, marketing, logistics, sales, etc.), Coastal resources management, Public administration, Environmental and business consultancies, Environmental protection regional development, Fishing tourism.

<b>Topic:</b> Sustainable Aquaculture		
<b>Course:</b> <a href="#">Aquaculture</a>		
<b>University:</b> Agricultural University of Athens		
<b>6 ECTS</b>	<b>Language:</b>	English
<b>Stage of accreditation:</b> Accredited by the Hellenic Authority for Higher Education (HAHE) as part of an official AUA study programme.		
<b>What will you learn:</b>		
<ul style="list-style-type: none"> <li>• History of aquaculture and its present state,</li> <li>• Aquaculture species,</li> <li>• Different systems and production phases of aquaculture,</li> <li>• Selection of sites and species for aquaculture,</li> <li>• Water quality for aquaculture,</li> <li>• Design and construction of aquafarms,</li> <li>• Nutrition and feeds, live feed,</li> <li>• Harvesting and post-harvest technology,</li> <li>• Marketing of aquaculture products,</li> <li>• Farm management,</li> <li>• Sustainability and environmental management of aquaculture,</li> <li>• Laboratory-based training on zootechnical practices</li> <li>• Function of Recirculating Aquaculture System, monitoring water quality and the maintenance of live feed (phytoplankton, rotifers, <i>Artemia</i>).</li> </ul>		
<b>Who is this course for?</b>		
<p><b>The course is:</b></p> <ul style="list-style-type: none"> <li>• Open for students from any study programme</li> <li>• Recommended to the students the last study semesters who are interested in marine biology, fisheries, aquatic environment and food technology.</li> </ul> <p><b>Your track in EU-CONEXUS Minors:</b></p> <p>This course is especially beneficial after or before: Fisheries, Built Facilities for Aquaculture, or any other course from this Minor Programme.</p>		
<b>Course activities:</b>		
<ul style="list-style-type: none"> <li>• Technical visit to an offshore fish farm with floating cages,</li> <li>• Technical visit to a fish hatchery.</li> </ul>		
<b>Soft skills:</b>		
Analytical skills, research, group/team working, problem solving, presentation.		
<b>Prerequisites:</b>		
Basic concepts in biology (animal classification and main characteristics).		

<b>Topic:</b> Fisheries		
<b>Course:</b> Fisheries		
<b>University:</b> University of Zadar		
<b>6 ECTS</b>	<b>Language:</b>	English
<b>Stage of accreditation:</b> Accredited by the Agency for Science and Higher Education ( <u>AZVO</u> ) as part of official UNIZD study programmes.		
<b>What will you learn:</b>		
<p>The student taking this subject will understand conceptually and value the importance of the study of marine living resources in the context of today's science and society.</p> <p>The student will be able to identify the main exploited marine resources, know basics of their biology, locate, and understand the location of the main fishing grounds and interaction with the environment.</p> <p>The student will learn the main techniques of search and extraction of marine living resources and apply the protocols in their evaluation. The student will know diverse experiences of management of marine living resources and will be able to recognise the environmental and socio-economic implications of the fishing activity.</p>		
<b>Who is this course for?</b>		
<p><b>The course is:</b></p> <ul style="list-style-type: none"> <li>• Open for students from any study programme.</li> <li>• Recommended to students of all study years, especially those with focus in Aquaculture, Environmental Management and Biodiversity.</li> </ul> <p><b>Your track in EU-CONEXUS Minors:</b> This course is especially beneficial after or before: Topic Aquaculture, course Aquaculture</p>		
<b>Course activities:</b>		
<ul style="list-style-type: none"> <li>• Experts' specialized lectures</li> <li>• E – learning tools</li> </ul>		
<b>Soft skills:</b>		
Analytical skills, group/team working, written communication, project management.		
<b>Prerequisites:</b>		
Basic concepts in biology (animal classification and main characteristics).		
<b>More information:</b>		
<a href="https://www.eu-conexus.eu/wp-content/uploads/2022/10/Minor-in-Blue-economy-and-growth-Catalogue_19.10.2022_READY.pdf">https://www.eu-conexus.eu/wp-content/uploads/2022/10/Minor-in-Blue-economy-and-growth-Catalogue_19.10.2022_READY.pdf</a>		





## Marine Biotechnology Sector

Marine biotechnology is key to reveal the potential of marine bio-resources. This potential remains largely untapped and should be discovered. Marine resources could produce new products and processes, and help address the global challenges of food, energy, health and sustainability.

From GLOBE NEWSWIRE published on 4 March 2019 – ‘The **global marine biotechnology market** is expected to grow significantly **from USD 3,500.4 million** in 2017 to **USD 6,500.6 million** in 2024(..). The growth in the market is attributed to the rising usage of marine biotechnology in various industries, advances in drug discovery and growing expenditure in

R&D activities. Moreover, increasing demand for eco-friendly products is further propelling the market growth’.

The marine biotechnology sector is composed of ‘big pharma’, start-up, SMEs or micro-enterprises everywhere in the world. From operators to PhD graduates, this growing sector need skilled people aware of technics useful to produce biomasses, extract, purify, and characterised biomolecules. Innovation is also one keyword of this still emerging sector.

The academic offer of the Marine Biotechnology sector will, therefore, provide you with knowledge in marine technology in general, to discover this area. Then, courses that are more specific will give you tools to produce biomasses, use marine living organisms and understand functionalities.

To learn more and gain the competences in Marine Biotechnology we recommend to choose from the following **courses**:

Sector	Topic	Course	Semester	ECTS	University
Marine Biotechnology	<b>4. Blue Biomass Applications</b>	4.3. Blue Biomass Applications from obtention to application	Spring	6	LRUniv
	<b>5. Biotechnology of Marine Bioactive Molecules</b>	5.1. Biotechnology of Marine Bioactive Molecules	Spring	6	AUA
		5.2. Marine Biotechnology	Autumn	6	UCV
	<b>6. Microbial Nanobiotechnology</b>	6.1. Introduction to Microbial Biotechnology	Autumn	6	UNIZD
		6.2. Enzymes and Microbes as Tools for Blue Biotechnology	Spring	6	LRUniv
		6.3. Modern and innovative insight on industrial microbiology and biotechnology	Autumn	6	LRUniv

## Employability

Agrifood industry using marine resources (algae’s, fishes by-products), biotechnology companies, biomasses processing companies, pharmaceutical companies using marine bio sourced molecules.



<b>Topic:</b> Blue Biomasses Applications		
<b>Course:</b> <a href="#">Blue Biomasses from Obtention to Application</a>		
<b>University:</b> La Rochelle Université		
<b>6 ECTS</b>	<b>Language:</b>	English
<b>Stage of accreditation:</b> Accredited by the French Ministry of Higher Education, Research, and Innovation as part of an initial degree programme at La Rochelle University		
<b>What will you learn:</b>		
<ul style="list-style-type: none"> <li>• What are blue biomasses that are available</li> <li>• How to convert biomasses to obtain valuable actives</li> <li>• What products are on the market</li> </ul>		
<b>Who is this course for?</b>		
<p><b>This course is:</b> Recommended to the students with an interest in sciences.</p> <p><b>Your track in EU-CONEXUS Minors:</b> This course is especially beneficial after or before: Aquaculture, Fisheries, Bioenergy and Waste to Energy, Energy from Renewable Resources, Entrepreneurship, Environmental Economy, Ocean Governance and Blue Economy.</p>		
<b>Course activities:</b>		
<ul style="list-style-type: none"> <li>• Lectures</li> <li>• Individual work (blue biomass availability)</li> <li>• Group work (will you survive with only blue biomass)</li> </ul>		
<b>Soft skills:</b>		
Analytical skills, group/team working, research (scientific writing and oral presentation), ICT skills.		
<b>Prerequisites:</b>		
None		
<b>More information:</b>		
<a href="https://formations.univ-larochelle.fr/licence-sciences-sante">https://formations.univ-larochelle.fr/licence-sciences-sante</a>		

<b>Topic:</b> Biotechnology of Marine Bioactive Molecules		
<b>Course:</b> <a href="#">Biotechnology and Nanobiotechnology of Marine Bioactive Molecules</a>		
<b>University:</b> Agricultural University of Athens		
6 ECTS	<b>Language:</b>	English
<b>Stage of accreditation:</b> Accredited by the Hellenic Authority for Higher Education (HAHE) as part of an official AUA study programme.		
<b>What will you learn:</b>		
<p>Biotechnology involves the application of science and technology to produce knowledge, goods and services for the improvement of human health. Therefore, the course of Biotechnology and Nanobiotechnology of Marine Bioactive molecules will describe the characteristics of marine molecules or extracts, introduce bioprospecting strategies (mass production, marketing-oriented tools), screening techniques of bioactivity (in vitro-methods, in vivo-methods, biomass extraction, metabolomics), methods for immobilizing/entrapping biomolecules and molecular interaction and modelling. The subject will enable the student to learn the main biotechnological applications of marine bioactive molecules in human health and nutrition or personal care products (cosmeceuticals, cosmetics). Students will undertake laboratory-based training and practical experience in state-of-the-art laboratory techniques (omic technologies, cell-culture, PCRs, synthesis and extraction of RNA, electrophoresis, etc.).</p>		
<b>Who is this course for?</b>		
<p><b>The course is:</b></p> <ul style="list-style-type: none"> <li>• open for students from study programme addressed to Life Science such as Biology, Biotechnology, Chemistry, Pharmaceutics, Molecular Biology etc</li> <li>• recommended to the students after the 3rd study semester who are interested in Biotechnology and would like to learn more about the characterisation and extraction of marine molecules</li> </ul> <p><b>Your track in EU-CONEXUS Minors:</b></p> <p>This course is especially beneficial after or before: Marine Biotechnology, Introduction to Microbial Biotechnology, Modern and innovative insight on industrial microbiology and biotechnology or any other course from this Minor Programme.</p>		
<b>Course activities:</b>		
The student will learn to develop the whole scientific process (from sampling to scientific writing).		
<b>Soft skills:</b>		
Analytical skills, group/team working, ICT skills, autonomous work, work in a multidisciplinary environment, innovation/creativity (promotion of free, creative and inductive thought).		
<b>Prerequisites:</b>		
Basic background in: 1) biochemistry (hydrocarbons, proteins, lipids), other biomolecules RNA, DNA. 2) cell biology (photosynthesis, metabolism, etc.). 3) taxonomy. 4) bioinformatics.		

<b>Topic:</b> Biotechnology of Marine Bioactive Molecules		
<b>Course:</b> <a href="#">Marine Biotechnology</a>		
<b>University:</b> Universidad Católica de Valencia		
<b>6 ECTS</b>	<b>Language:</b>	English
<b>Stage of accreditation:</b> Accredited by the Spanish National Agency for the Assessment of Quality and Accreditation (ANECA) as part of an official UCV study programme		
<b>What will you learn:</b>		
<ul style="list-style-type: none"> <li>• Application of science and technology to produce knowledge, goods, and services from marine biological resources,</li> <li>• Characteristics of secondary metabolites,</li> <li>• Introduce bioprospecting strategies and screening techniques of marine organisms and a wide range of biotechnologies (treatment technology, bioremediation, on-site and 'ex-situ' technologies),</li> <li>• Main biotechnological applications in marine animals, human health, aquaculture, and food safety,</li> <li>• Laboratory-based training and practical experience in some techniques (PCRs, synthesis and extraction of RNA, electrophoresis, etc.)</li> </ul>		
<b>Who is this course for?</b>		
<p><b>This course is:</b></p> <p>Recommended to students with basic background in biochemistry, marine biology, and physiology of any academic year, especially those who have interest in marine environment and the products that can be obtained from it.</p> <p><b>Your track in EU-CONEXUS Minors:</b></p> <p>This course is especially beneficial after or before course any other subject from this minor.</p>		
<b>Course activities:</b>		
Laboratory practical in molecular biology of marine biotechnology using Labster (latest technology of virtual lab)		
<b>Soft skills:</b>		
Analytical skills, group/team working, research (molecular laboratory, scientific writing and oral presentation)		
<b>Prerequisites:</b>		
Basic background in biochemistry, marine biology and physiology		
<b>More information:</b>		
<a href="https://www.ucv.es/oferta-academica/grados/grado-en-ciencias-del-mar/seccion/guias-docentes/fichero/ficheroquiadocenteingles/id/270227/plan/2008/mod/2016">https://www.ucv.es/oferta-academica/grados/grado-en-ciencias-del-mar/seccion/guias-docentes/fichero/ficheroquiadocenteingles/id/270227/plan/2008/mod/2016</a>		

<b>Topic:</b> Microbial Nanobiotechnology		
<b>Course:</b> <a href="#">Introduction to Microbial Biotechnology</a>		
<b>University:</b> University of Zadar		
<b>6 ECTS</b>	<b>Language:</b>	English
<b>Stage of accreditation:</b> Accredited by the Agency for Science and Higher Education ( <a href="#">AZVO</a> ) as part of official UNIZD study programmes.		
<b>What will you learn:</b>		
<ul style="list-style-type: none"> <li>• Scientific knowledge for the use of microorganisms and their metabolites in various activities such as the production of goods in food, feed and pharmaceutical industry, agronomy and medicine,</li> <li>• Characteristics of secondary metabolites,</li> <li>• Bioprospecting strategies and enzymology as well as screening techniques applied in microbial biotechnology,</li> <li>• Main biotechnological applications of bacteria, yeasts and fungi and their metabolites in human and animal health and wellbeing,</li> <li>• Agriculture and food processing and safety.</li> </ul>		
<b>Course activities:</b>		
<ul style="list-style-type: none"> <li>• Guest lectures in probiotics,</li> <li>• Laboratory-based training in some techniques,</li> <li>• Group project preparation,</li> <li>• Visit to a biotech company.</li> </ul>		
<b>Soft skills:</b>		
Group/team working, problem solving, research, presentation, international communication.		
<b>Prerequisites:</b>		
Basic background in: 1) biochemistry (hydrocarbons, proteins, lipids, enzymes) 2) biology of the prokaryotic and eukaryotic cell (structure, metabolism, etc.).		

<b>Topic:</b> Microbial Nanobiotechnology		
<b>Course:</b> <a href="#">Enzymes and Microbes as Tools for Blue Biotechnology</a>		
<b>University:</b> La Rochelle Université		
<b>6 ECTS</b>	<b>Language:</b>	English
<b>Stage of accreditation:</b> Accredited by the French Ministry of Higher Education, Research and Innovation as part of an initial degree programme at La Rochelle University		
<b>What will you learn:</b>		
<ul style="list-style-type: none"> <li>• Enzymology applied to blue biotechnology: marine examples of oxidoreductases, hydrolases, transferases, isomerases, ligases, and lyases ready for food and pharmaceutical applications</li> <li>• The use of microorganisms in conversion processes to produce goods in various domains will be discussed</li> <li>• Methods to select adequate enzyme and microorganisms to reach conversion goals will be presented</li> </ul>		
<b>Who is this course for?</b>		
<p><b>This course is:</b> Recommended to the students with an interest in sciences</p> <p><b>Your track in EU-CONEXUS Minors:</b> This course is especially beneficial after or before: bioenergy and waste to energy, Energy from Renewable Resources, entrepreneurship, sustainable blue economy</p>		
<b>Course activities:</b>		
<ul style="list-style-type: none"> <li>• Group project work</li> <li>• Expert's lectures</li> </ul>		
<b>Soft skills:</b>		
Group/team working, problem solving, research, presentation, international communication.		
<b>Prerequisites:</b>		
Basic background in: 1) biochemistry 2) enzymology 3) microbiology.		
<b>More information:</b>		
<a href="https://formations.univ-larochelle.fr/licence-sciences-sante">https://formations.univ-larochelle.fr/licence-sciences-sante</a>		

<b>Topic:</b> Microbial Nanobiotechnology		
<b>Course:</b> <a href="#">Modern and innovative insight on industrial microbiology and biotechnology</a>		
<b>University:</b> La Rochelle Université		
<b>6 ECTS</b>	<b>Language:</b>	English
<b>Stage of accreditation:</b> Accredited by the French Ministry of Higher Education, Research, and Innovation as part of an initial degree programme at La Rochelle University		
<b>What will you learn:</b>		
<ul style="list-style-type: none"> <li>• To enable students to learn the cutting-edge technologies and strategies used in microbiology and industrial biotechnology based on molecular tools to meet current needs in different fields of applications.</li> <li>• To identify new tools and technologies especially genetic engineering, genomics and metagenomics, proteomics, bioinformatics and such like new areas promise exciting horizons for man's continued exploitation of microorganisms.</li> <li>• To discuss about new approaches available for the utilization of some physiological microbial growth of immobilized cells such as biofilms, in which new genetical regulation and biochemical products can be selectively produced.</li> <li>• About a search for alternate fermentation substrates.</li> </ul>		
<b>Who is this course for?</b>		
<p><b>This course is:</b> Recommended to the students with an interest in sciences</p> <p><b>Your track in EU-CONEXUS Minors:</b> This course is especially beneficial after or before: bioenergy and waste to energy, Energy from Renewable Resources, entrepreneurship, sustainable blue economy</p>		
<b>Course activities</b>		
Lectures		
<b>Soft skills:</b>		
Strategy and the new techniques to be able to propose or analyze a production scheme for a bioactives.		
<b>Prerequisites:</b>		
Background in: microbiology, molecular biology and biochemical engineering		
<b>More information:</b>		
<a href="https://formations.univ-larochelle.fr/licence-sciences-sante">https://formations.univ-larochelle.fr/licence-sciences-sante</a>		



## Ocean Energy Sector

Ocean energy is abundant, geographically diverse and renewable. Under favourable regulatory and economic conditions, ocean energy could meet 10% of the European Union's power demand by 2050, based on clean, renewable and infinite domestic resources. Together with the first generation of renewable energy technologies, such as solar and wind, EU will reach its objective of reducing greenhouse gas emissions to 80–95 % below 1990 levels by 2050 when power generated by the ocean energy sector could avoid the equivalent of 276m tonnes of CO<sub>2</sub> emissions annually.<sup>2</sup>

Within the Minor of Blue Economy and Growth, the 'Ocean Energy' sector welcomes students eager to learn more about Blue and renewable energy, and marine mineral resources, with courses that will deepen the knowledge and practical use of classical or unconventional sources of mechanical and thermal energy in the oceans and from the coastal area. Students will study the fundamentals and practical applications of the capture,

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<sup>2</sup> Ocean Energy Strategic Roadmap Building Ocean Energy For Europe-  
<https://webgate.ec.europa.eu/maritimeforum/en/frontpage/1036>

conversion, and shore transmission of energy from wind, waves, tides and sea currents, as well as solar energy, chemical energy of biomass and thermal energy of the oceans.

To learn more and gain the competences in Ocean Energy we recommend to choose from the following **courses**:

Sector	Topic	Course	Semester	ECTS	University
Ocean energy	<b>7. Bioenergy and Waste to Energy</b>	7.1. Bioenergy and Waste to Energy	Autumn	6	UROS
	<b>8. Energy from Renewable Resources I (wind, waves, tidal, currents)</b>	8.1. Energy from Renewable Resources I (wind, waves, tidal, currents)	Spring	6	UTCB
	<b>9. Energy from Renewable Resources II (solar, hydrothermal, biomass, osmotic, OTEC)</b>	9.1. Energy from Renewable Resources II (solar, hydrothermal, biomass, osmotic, OTEC)	Spring	6	UTCB

### Employability

Renewable energies sector, aquaculture engineering, offshore industries, environment protection.



<b>Topic:</b> Bioenergy and Waste to Energy		
<b>Course:</b> Bioenergy and Waste to Energy		
<b>University:</b> University of Rostock		
<b>6 ECTS</b>	<b>Language:</b>	English
<b>Stage of accreditation:</b> As a university, the University of Rostock is authorised for the purposes of «system accreditation». An internal certification system is used by the university for most accreditation procedures. The modules underwent the process of quality assurance		
<b>What will you learn:</b>		
<ul style="list-style-type: none"> <li>• Fundamental principles of waste management, with particular emphasis on energy recovery.</li> <li>• Waste generation, waste characterisation and techniques for waste collection, storage, transport, and utilisation (including recycling and recovery).</li> <li>• Application of engineering science to develop integrated waste management systems incorporating energy recovery.</li> <li>• General knowledge on biomass abundance and management, the chemical composition of important biomass resources, and all major biomass conversion technologies.</li> <li>• The following technologies will be introduced: thermo-chemical, physico-chemical, biochemical. The technologies are linked to their respective raw materials as well as to limitations and chances for bioenergy considering aspects of both management and technology.</li> </ul>		
<b>Who is this course for?</b>		
<p><b>The course is:</b></p> <ul style="list-style-type: none"> <li>• Open for students from any study programme</li> <li>• Recommended to students of all study years, especially those with basic knowledge about: <ul style="list-style-type: none"> <li>○ Waste management hierarchy.</li> <li>○ Key waste management legislation at the national and EU levels.</li> <li>○ The essential elements to be included in a waste management plan.</li> <li>○ Outline on the main features in the design principles and operation of biogas, composting and incineration plants.</li> <li>○ Highlights on the key features to calculate design parameters and efficiencies of waste-to-energy technologies such as anaerobic digestion, incineration and hydrothermal carbonization.</li> </ul> </li> </ul> <p><i>Your track in EU-CONEXUS Minors:</i></p> <p>This course is especially beneficial after or before: Pollution/Depollution (water, air, soil)</p>		
<b>Course activities:</b>		
<ul style="list-style-type: none"> <li>• Intensive and detailed lecture from the experts of the field</li> <li>• Presentation by students on the selected topics related to waste to energy and bioenergy</li> <li>• Written examination.</li> </ul> <p>Both the written examination and the presentation delivered by students will be monitored and evaluated for the final results the students.</p>		
<b>Soft skills:</b>		
Presentation skills and design thinking - problem-solving and creating new ideas, understanding of the design thinking process.		
<b>Prerequisites:</b>		
Basic knowledge about waste management, waste to energy, energy conversion as well as renewable energy conversion technologies		

<b>Topic:</b> Energy from Renewable Sources I		
<b>Course:</b> <a href="#">Energy from Renewable Sources I</a>		
<b>University:</b> Technical University of Civil Engineering Bucharest		
<b>6 ECTS</b>	<b>Language:</b>	English
<b>Stage of accreditation:</b> Accredited by the Romanian Agency for Quality Assurance in Higher Education (ARCAIS) as part of an official UTCB study programme. The study programme has also the EUR-ACE® label from the European Network for Accreditation of Engineering Education (ENAAE)		
<b>What will you learn:</b>		
Starting from the definition of renewable energy, the course will focus on mechanical energy sources (wind and water). The time variability of the resources will be discussed in conjunction to human consumption habits. Energy transportation networks will be discussed along with the conversion of the mechanical energy of the ocean into electrical energy and transporting it to shore. Elements related to electric generators, transformation systems, protection and safety systems and intelligent control of ocean power plants would be studied. Students will become familiar with the differences between efficiency and capacity factors as well as between installed power and energy production.		
<b>Course activities:</b>		
Some of the lectures will include virtual laboratory demonstrations.		
<b>Soft skills:</b>		
Analytical skills, problem solving, Innovation/creativity, presentation, ICT skills.		
<b>Prerequisites:</b>		
Computer literacy, basic use of Microsoft Office package. The course will introduce all the necessary technical notions.		
<b>More information:</b>		
<a href="https://utcb.ro/en/eu-conexus/minor-programmes/blue-economy-and-growth/energy-from-renewable-resources-i-wind-waves-tidal-currents/">https://utcb.ro/en/eu-conexus/minor-programmes/blue-economy-and-growth/energy-from-renewable-resources-i-wind-waves-tidal-currents/</a>		

<b>Topic:</b> Energy from Renewable Resources II		
<b>Course:</b> <a href="#">Energy from Renewable Resources II</a>		
<b>University:</b> Technical University of Civil Engineering Bucharest		
<b>6 ECTS</b>	<b>Language:</b>	English
<b>Stage of accreditation:</b> Accredited by the Romanian Agency for Quality Assurance in Higher Education (ARCAIS) as part of an official UTCB study programme. The study programme has also the EUR-ACE® label from the European Network for Accreditation of Engineering Education (ENAE)		
<b>What will you learn:</b>		
This course is addressed to students eager to know more about renewable sources of thermal energy in the seas and oceans as well as in the coastal area. We will study the potential of ocean energy sources and processes of thermal energy conversion with widely used installations and equipment such as solar thermal panels and photovoltaic panels, cycles of solar electric conversion, hydrothermal (marine) heat pumps, and the energy use of ocean or coastal biomass. Among the installations still in development, the cycles of OTEC (Ocean Thermal Energy Conversion) and osmotic (based on the difference in salinity) plants will be studied.		
<b>Course activities:</b>		
<b>Soft skills:</b>		
Analytical skills, group/team working, problem solving, presentation, international communication.		
<b>Prerequisites:</b>		
Computer literacy, basic use of Microsoft Office package. The course will introduce all the necessary technical notions.		
<b>More information:</b>		
<a href="https://utcb.ro/en/eu-conexus/minor-programmes/blue-economy-and-growth/energy-from-renewable-resources-ii-solar-hydrothermal-biomass-osmotic-otec/">https://utcb.ro/en/eu-conexus/minor-programmes/blue-economy-and-growth/energy-from-renewable-resources-ii-solar-hydrothermal-biomass-osmotic-otec/</a>		



## Transport and Shipbuilding Sector

Rapidly growing trade and the need for effective means of transport and its systems accompany globalisation. Shipping has been playing a crucial role here therefore the impact of shipping and seaport sector on the regional socio-economic activity is undeniable. To compete successfully, the need to understand how the global transport business ecosystem works, how to find the new innovative ways of transporting cargoes and passengers, how to develop more efficient mechanisms to deal with climate change.

Shipping is still responsible for approximately 2.5% of global greenhouse gas (GHG) emissions and represents approximately 13% of the overall EU GHG emissions from the transport sector in 2015. Further decrease in shipping emissions is obligatory in green-minded Europe, which call for greening of shipping and ports.

There are known many solutions how to reduce the impact from ships in operation but still not enough to meet IMO requirements in 2050. A new context presents designers and engineers with new opportunities. Similarly, maritime law, finance, broking and insurance can all benefit from the growing volume of sea trade.

To learn more and gain the competences in Transport and Shipbuilding we recommend to choose from the following **courses**:

Sector	Topic	Course	Semester	ECTS	University
Transport and Shipbuilding	<b>10. Sustainable Development of the Maritime Economy</b>	10.1. Sustainable Development of the Maritime Economy	Autumn	6	KU
	<b>11. Basics of Green Shipping</b>	11.2. Energy Transition in Shipping: Liquefied Natural Gas	Autumn	6	KU
	<b>12. Sustainable Transport Engineering for Coastal Region</b>	12.3. Sea Transport Development and Logistics	Autumn	6	KU

### Employability

Seaport authorities, Agencies, Associations, Forwarding, Container, Ro-ro terminals, Stevedoring, Cruise ship terminals, Travel agencies serving cruise vessel tourists, Ship suppliers, Ship repair, building, technical services, Shipping companies, Customs agents, etc.

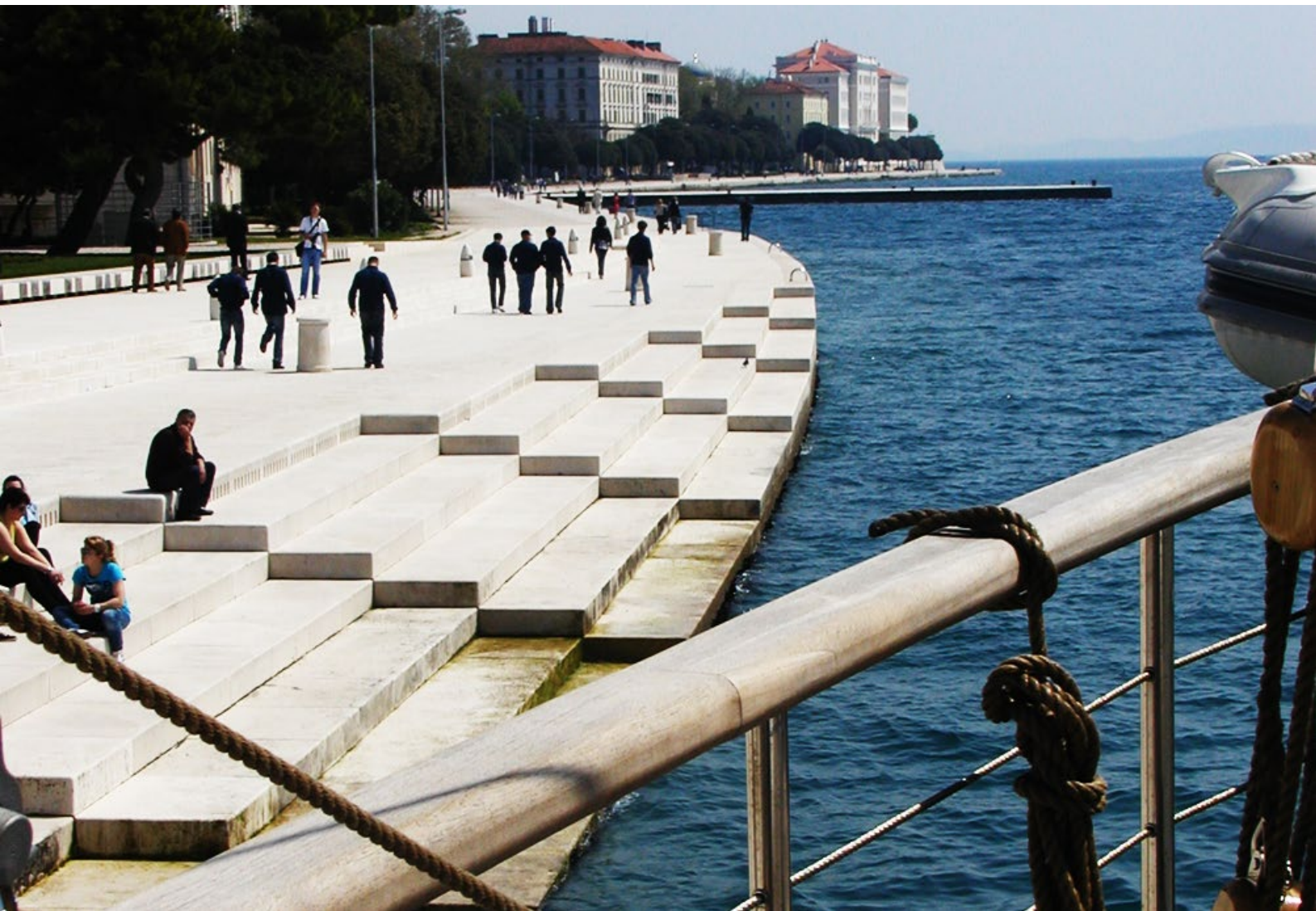
<b>Topic:</b> Sustainable Development of the Maritime Economy		
<b>Course:</b> <a href="#">Sustainable Development of the Maritime Economy</a>		
<b>University:</b> Klaipeda University		
<b>6 ECTS</b>	<b>Language:</b>	English
<b>Stage of accreditation:</b> Accredited by the Klaipeda university committee of study field		
<b>What will you learn:</b>		
<ul style="list-style-type: none"> <li>• A concept of the global and local environmental impact of maritime transport,</li> <li>• The impact of the economic development of the maritime industry on the ecosystems of port structures,</li> <li>• Theoretical and practical aspects of the maritime economy in terms of sustainable development,</li> <li>• Best practice for sustainable maritime economic growth,</li> <li>• Innovative solutions that ensure the harmonious development of the maritime economy.</li> </ul>		
<b>Who is this course for?</b>		
<p><b>The course is:</b></p> <ul style="list-style-type: none"> <li>• open for students from any study programme</li> <li>• recommended for students who are interested in sustainable development practices in maritime transport, and economics, and who want to understand the basic principles of applying sustainable development in this area.</li> </ul> <p><b>Your track in EU-CONEXUS Minors:</b></p> <p>This course is especially beneficial after or before take any other subject from this minor.</p>		
<b>Course activities:</b>		
<ul style="list-style-type: none"> <li>• Innovative learning experience (case method teaching) experts' lectures</li> <li>• International group project</li> <li>• Work with maritime development projects</li> <li>• Work with strategical management plans</li> </ul>		
<b>Soft skills:</b>		
Analytical skills of problems solving, group/team working, presentation, international communication		
<b>Prerequisites:</b>		
None.		

<b>Topic:</b> Basics of Green Shipping		
<b>Course:</b> Energy Transition in Shipping: Liquefied Natural Gas		
<b>University:</b> Klaipeda University		
<b>6 ECTS</b>	<b>Language:</b>	English
<b>Stage of accreditation:</b> Accredited by the Klaipeda university committee of study field		
<b>What will you learn:</b>		
<ul style="list-style-type: none"> <li>• International Maritime Organization Regulations on Greenhouse Gas and CO2 Emissions from Shipping</li> <li>• Calculation of maritime emission.</li> <li>• Cleaner ships: reduced emissions, less energy consumed, more efficient.</li> <li>• Liquefied Natural Gas (LNG) as a transition fuel for cleaning of shipping:</li> <li>• LNG production, transportation and storage;</li> <li>• LNG onshore and floating terminals;</li> <li>• LNG-driven ships and bunkering facilities;</li> <li>• LNG supply chain and value chain development.</li> </ul>		
<b>Who is this course for?</b>		
<p><b>The course is:</b></p> <ul style="list-style-type: none"> <li>• open for students from any study programme</li> <li>• recommended for students who want to learn more about the concept of green shipping and have an understanding of liquefied natural gas terminals.</li> </ul> <p><b>Your track in EU-CONEXUS Minors:</b></p> <p>This course is especially beneficial after or before take any other subject from this minor.</p>		
<b>Course activities:</b>		
<ul style="list-style-type: none"> <li>• Innovative learning experience (case method teaching)</li> <li>• Interactive seminars</li> <li>• Experts' lectures</li> <li>• Short-term training visit</li> </ul>		
<b>Soft skills:</b>		
Group/team working, international communication.		
<b>Prerequisites:</b>		
None.		



<b>Topic:</b> Sustainable Transport Engineering for Coastal Region		
<b>Course:</b> <a href="#">Sea Transport Development and Logistics</a>		
<b>University:</b> Klaipeda University		
<b>6 ECTS</b>	<b>Language:</b>	English
<b>Stage of accreditation:</b> Accredited by the Klaipeda university committee of study field		
<b>What will you learn:</b>		
<ul style="list-style-type: none"> <li>• The role of maritime transport in the international logistics chain,</li> <li>• Theoretical and practical aspects of the development of the maritime transport system,</li> <li>• The latest methods of sea transportation in various conditions,</li> <li>• Organization of oversized cargo transportation,</li> <li>• Port and waterway planning,</li> <li>• Operation and development of marine highways,</li> <li>• Environmental impact and risk assessment in maritime transport.</li> </ul>		
<b>Who is this course for?</b>		
<p><b>The course is:</b></p> <ul style="list-style-type: none"> <li>• open for students from any study programme</li> <li>• recommended for students who want to learn more about the role of maritime transport in logistics and have an understanding of maritime highways and transportation.</li> </ul> <p><b>Your track in EU-CONEXUS Minors:</b></p> <p>This course is especially beneficial after or before take any other subject from this minor.</p>		
<b>Course activities:</b>		
<ul style="list-style-type: none"> <li>• Innovative learning experience (case method teaching)</li> <li>• Interactive seminars</li> <li>• Experts' lectures</li> <li>• Work with motorways of the sea development projects</li> <li>• Work with port development projects</li> </ul>		
<b>Soft skills:</b>		
Analytical skills of problems solving, critical thinking, group/team working, international communication, presentation.		
<b>Prerequisites:</b>		
None.		





## Coastal and Maritime Tourism Sector

Today's tourists seek a unique and customised holiday experience, not only traditionally offered packages of beautiful coast, beach, and sun. These changes on the demand side require reaction and adaptation by operators and destinations, i.e. enhancing the levels of creativity and adaptability in tourism businesses. The sector should, besides traditional offer, develop new products promoting attractiveness and accessibility of coastal and marine archaeology, maritime heritage, underwater tourism, and eno-gastronomic activities, among other activities. During that, process focus of all stakeholders in tourism should be on sustainable tourism.

The academic offer of the Coastal and Maritime Tourism sector will, therefore, provide you knowledge in entrepreneurship in tourism, in creation of new tourism product which is more aligned with new tourist's needs, in creating of products that balance tourist needs and sustainability.

To learn more and gain the competences in Coastal and Maritime Tourism we recommend to choose from the following **courses**:

Sector	Topic	Course	Semester	ECTS	University
Coastal and Maritime Tourism	13. Sustainable Tourism Development	13.1. Sustainable Tourism Development	Autumn	6	AUA
		13.2. Sustainable Tourism Development	Spring	6	KU
	14. Entrepreneurship, Creativity and Innovation Management	14.1. Entrepreneurship	Spring	6	AUA
		14.2. Entrepreneurship	Autumn	6	UNIZD
		14.3. Creativity and Innovation Management	Spring	6	UCV
		14.4. Entrepreneurship and innovation around sustainable tourism	Spring	6	LRUniv
	15. Introduction to Underwater Archaeology	15.1. Introduction to Underwater Archaeology	Spring	6	UNIZD
	16. Sustainable Blue Economy	16.1 Introduction to Environmental and Resource Economics	Spring	6	UROS
		16.2 Environmental Economics	Spring	6	LRUniv
		16.3 Ocean governance and blue economy	Spring	6	LRUniv

### Employability

Expertise in Coastal and Maritime Tourism is required in economic sectors that are related to tourism: public and private sector, hotel industry, gastro industry, entertainment industry, local community organisations, regional development, etc.

<b>Topic:</b> Sustainable Tourism Development		
<b>Course:</b> Sustainable Tourism Development		
<b>University:</b> Agricultural University of Athens		
<b>6 ECTS</b>	<b>Language:</b>	English
<b>Stage of accreditation:</b> Accredited by the Hellenic Authority for Higher Education (HAHE) as part of an official AUA study programme.		
<b>What will you learn:</b>		
<ul style="list-style-type: none"> <li>• Concepts of environmental impact</li> <li>• Sustainability and the challenges proposed in the New Economics paradigm, from which tourism can borrow examples of development.</li> <li>• Nature of externalities generated by tourism, the difference between the generation of income and wellbeing, analysing environmental impacts caused by tourism, understanding the difference between renewable and non-renewable resources and the treatment of the environment as a sink.</li> <li>• Basic tools for economic valuation that could be employed for all-inclusive pricing of tourism products, which will also enable full compensation for the environmental impact caused by tourism, particularly for socially fair pricing of open-access resources.</li> <li>• Major policy events and summits from which new deadlines for correcting environmental damaging behaviours, there are various tools available, through which unsustainable cases can be remedied or even circumvented (e.g. taxes, permits, ownership, subsidies, laws and controls, corporate social responsibility, special designation, tradable rights, tourism eco-labelling, certification and award schemes, ecotourism approaches, etc.).</li> </ul>		
<b>Who is this course for?</b>		
<p>The course is:</p> <ul style="list-style-type: none"> <li>• Open for students from any study programme</li> <li>• Recommended to the students of the last study semesters who are interested in understanding of the complex challenges facing the tourism industry and gaining the knowledge and skills to create sustainable and responsible tourism solutions.</li> </ul> <p><b>Your track in EU-CONEXUS Minors:</b></p> <p>This course is especially beneficial after or before: Entrepreneurship and Innovation around Sustainable Tourism, or any other course from this Minor Programme.</p>		
<b>Course activities:</b>		
<ul style="list-style-type: none"> <li>• Presentation of case studies and movies.</li> <li>• Major case studies reflection and observation of learning through movies and YouTube material.</li> </ul>		
<b>Soft skills:</b>		
Group/team working, research (scientific writing and oral presentation), ICT skills.		
<b>Prerequisites:</b>		
None.		

<b>Topic:</b> Sustainable Tourism Development		
<b>Course:</b> Sustainable Tourism Development		
<b>University:</b> Klaipeda University		
<b>6 ECTS</b>	<b>Language:</b>	English
<b>Stage of accreditation:</b> Accredited by the Klaipeda university committee of study field		
<b>What will you learn:</b>		
<ul style="list-style-type: none"> <li>• Concepts of sustainable tourism development,</li> <li>• Sustainable tourism models, principles, and their practical application in tourism management,</li> <li>• Strengths and challenges of tourism as a tool for sustainable development,</li> <li>• The main actors of sustainable tourism, their impact, and mutual interaction,</li> <li>• The impact of the tourism industry on local communities,</li> <li>• The impact of sustainable tourism on different types of tourism sectors and types of tourism.</li> </ul>		
<b>Who is this course for?</b>		
<p><b>The course is:</b></p> <ul style="list-style-type: none"> <li>• open for students from any study programme</li> <li>• recommended for students who want to learn more about sustainable tourism, especially sustainable coastal tourism.</li> </ul> <p><b>Your track in EU-CONEXUS Minors:</b></p> <p>This course is especially beneficial after or before take any other subject from this minor.</p>		
<b>Course activities:</b>		
<ul style="list-style-type: none"> <li>• innovative learning experience (case method teaching)</li> <li>• experts' lectures</li> <li>• international group project</li> </ul>		
<b>Soft skills:</b>		
Analytical skills, group/team working, international communication, problem solving, presentation, creativity.		
<b>Prerequisites:</b>		
None.		

<b>Topic:</b> Entrepreneurship, Creativity and Innovation Management		
<b>Course:</b> <a href="#">Entrepreneurship</a>		
<b>University:</b> Agricultural University of Athens		
<b>6 ECTS</b>	<b>Language:</b>	English
<b>Stage of accreditation:</b> Accredited by the Hellenic Authority for Higher Education (HAHE) as part of an official AUA study programme.		
<b>What will you learn:</b>		
<ul style="list-style-type: none"> <li>• Concept of entrepreneurship and the steps for successful entrepreneurship,</li> <li>• Nature of startups, what constitutes corporate entrepreneurship, the acknowledgement of entrepreneurial opportunities in coastal and marine tourism,</li> <li>• Fundamental entrepreneurship skills and the management of creativity of innovation,</li> <li>• Different definitions of innovation, its implementation and how innovation is incorporated in the tourism business.</li> </ul> <p>By the end of the course, the student will be able to recognize creative and innovative opportunities and will be able to turn them to the benefit of a tourism business.</p>		
<b>Who is this course for?</b>		
<p>The course is:</p> <ul style="list-style-type: none"> <li>• Open for students from any study programme, especially those studying Economics, Management or Business.</li> <li>• Recommended to the students of the last study semesters who are interested in entrepreneurial spirit and mindset, technology, innovation, and management.</li> </ul> <p><b>Your track in EU-CONEXUS Minors:</b></p> <p>This course is especially beneficial after or before: Creativity and Innovation Management, Entrepreneurship, and Innovation around Sustainable Tourism, or any other course from this Minor Programme.</p>		
<b>Course activities</b>		
<ul style="list-style-type: none"> <li>• Presentation of case studies and movies</li> <li>• Interviews with successful entrepreneurs, success stories.</li> <li>• Major case studies reflection and observation of learning through movies and YouTube material</li> </ul>		
<b>Soft skills:</b>		
Group/team working, research (scientific writing and oral presentation), ICT skills.		
<b>Prerequisites:</b>		
None		

<b>Topic:</b> Entrepreneurship		
<b>Course:</b> <b>Entrepreneurship</b>		
<b>University:</b> University of Zadar		
<b>6 ECTS</b>	<b>Language:</b>	English
<b>Stage of accreditation:</b> Accredited by the Agency for Science and Higher Education ( <u>AZVO</u> ) as part of official UNIZD study programmes.		
<b>What will you learn:</b>		
<ul style="list-style-type: none"> <li>• Basic principles of entrepreneurship,</li> <li>• The role of entrepreneurship in economic and social life,</li> <li>• How to turn an idea into a business project,</li> <li>• How to create a simple business plan.</li> </ul>		
<b>Who is this course for?</b>		
<p><b>The course is:</b></p> <ul style="list-style-type: none"> <li>• Open for students from any study programme</li> <li>• Recommended to the students who want to learn how to design a business project in a simple way</li> </ul> <p><b>Your track in EU-CONEXUS Minors:</b></p> <p>The course is especially useful for students who want to design their own business project and analyze it through the creation of a business plan, whether it is profitable or not.</p>		
<b>Course activities:</b>		
<ul style="list-style-type: none"> <li>• Acquiring basic knowledge about entrepreneurship</li> <li>• Designing your own business project</li> <li>• Expert lecture</li> <li>• Creation of a simple business plan</li> </ul>		
<b>Soft skills:</b>		
Own project designing, presentation skills, investment profitability analysis		
<b>Prerequisites:</b>		
None.		

<b>Topic:</b> Entrepreneurship, Creativity, and Innovation Management		
<b>Course:</b> <b>Creativity and Innovation Management</b>		
<b>University:</b> Universidad Católica de Valencia		
6 ECTS	<b>Language:</b>	English
<b>Stage of accreditation:</b> Accredited by the Spanish National Agency for the Assessment of Quality and Accreditation (ANECA) as part of an official UCV study programme		
What will you learn:		
<p>Basic concepts and tools to implement and operate innovation management in an organisation, skills and values needed to carry out a collaborative creative work aimed at achieving objectives of improvement and innovation,</p> <p>Basic concepts of managing innovation and creativity,</p> <p>The innovation strategy and value creation,</p> <p>How to build an innovative organisation,</p> <p>How to follow an innovation process.</p>		
Who is this course for?		
<p>The course is:</p> <ul style="list-style-type: none"> <li>• Open for students from any study programme</li> <li>• Recommended to the students of the last study years, especially those who have already thought of some product or service and would like to learn more how to develop the innovation from the idea to the market</li> </ul> <p><b>Your track in EU-CONEXUS Minors:</b></p> <p>This course is especially beneficial after or before: Entrepreneurship, Environmental Economics, Ocean governance and Blue Economy, or any other course from this Minor Programme.</p>		
Course activities:		
<p>Innovative learning experience (case method teaching)</p> <p>Experts' lectures</p> <p>Work with entrepreneurs to build individual innovation strategy</p>		
Soft skills:		
Group/team working, innovation/creativity, international communication, project management.		
Prerequisites:		
None.		
More information:		
<a href="https://www.ucv.es/oferta-academica/grados/grado-en-administracion-y-direccion-de-empresas/seccion/guias-docentes/fichero/ficheroquiadocenteingles/id/302016/plan/2008/mod/2016">https://www.ucv.es/oferta-academica/grados/grado-en-administracion-y-direccion-de-empresas/seccion/guias-docentes/fichero/ficheroquiadocenteingles/id/302016/plan/2008/mod/2016</a>		



<b>Topic:</b> Entrepreneurship, Creativity and Innovation Management		
<b>Course:</b> <a href="#">Entrepreneurship and innovation around sustainable tourism</a>		
<b>University:</b> La Rochelle Université		
6 ECTS	<b>Language:</b>	English
<b>Stage of accreditation:</b> Accredited by the French Ministry of Higher Education, Research and Innovation as part of an initial degree programme at La Rochelle University		
What will you learn:		
<p>Basic tools to formalize an idea into a project through creativity sessions.          What innovation is and how it is inseparable from entrepreneurship          All the entrepreneurial concepts addressed are in line with societal, environmental and sustainable issues.</p>		
Who is this course for?		
<p>This course is:          Open for students from any study programme.  <b><i>Your track in EU-CONEXUS Minors</i></b>          This course is especially beneficial after or before: every course offered</p>		
Course activities:		
<ul style="list-style-type: none"> <li>• Escape Game</li> <li>• Case study</li> <li>• Lectures</li> <li>• Workshop</li> <li>• Mobility to La Rochelle</li> </ul>		
Soft skills:		
Analytical skills, group/team working, problem solving, research, presentation, Innovation/creativity, project management.		
Prerequisites:		
None.		



<b>Topic:</b> Introduction to Underwater Archaeology		
<b>Course:</b> <a href="#">Introduction to Underwater Archaeology</a>		
<b>University:</b> University of Zadar		
<b>6 ECTS</b>	<b>Language:</b>	English
<b>Stage of accreditation:</b> Accredited by the Agency for Science and Higher Education ( <a href="#">AZVO</a> ) as part of official UNIZD study programmes.		
<b>What will you learn:</b>		
<ul style="list-style-type: none"> <li>• Development and achievements of the underwater archaeology;</li> <li>• Types of underwater archaeological sites;</li> <li>• Basic methodology of the underwater archaeological research;</li> <li>• Importance and value of the underwater cultural heritage and the need of its protection and preservation;</li> <li>• Famous underwater archaeological sites in the world.</li> </ul>		
<b>Who is this course for?</b>		
<p><b>The course is:</b></p> <ul style="list-style-type: none"> <li>• Open for students from any study programme;</li> <li>• Recommended for students which want to take part in the research, protection, and preservation of the underwater cultural heritage.</li> </ul> <p><b>Your track in EU-CONEXUS Minors:</b></p> <p>This course is especially beneficial for students following the course Sustainable Tourism Development (Blue Economy and Growth) and Maritime History and Maritime Cultural Heritage (Coastal Development and Sustainable Maritime Tourism), but also for other students that follow the courses from the Minor Programmes.</p>		
<b>Course activities:</b>		
<ul style="list-style-type: none"> <li>• Experts' and entrepreneurs' lectures</li> <li>• Seminars</li> <li>• Practical experience in the field</li> </ul>		
<b>Soft skills:</b>		
Analytical skills, group/team working, research, presentation, project management.		
<b>Prerequisites:</b>		
None.		
<b>More information:</b>		
<a href="https://www.unizd.hr/Portals/0/ms/syllabi/20_21_ARCHAE_W_Introduction%20to%20underwater%20archaeology.pdf?ver=2020-03-06-154928-167">https://www.unizd.hr/Portals/0/ms/syllabi/20_21_ARCHAE_W_Introduction%20to%20underwater%20archaeology.pdf?ver=2020-03-06-154928-167</a>		

<b>Topic:</b> Sustainable Blue Economy		
<b>Course:</b> Introduction to Environmental and Resource Economics		
<b>University:</b> University of Rostock		
<b>6 ECTS</b>	<b>Language:</b>	English
<b>Stage of accreditation:</b> As a university, the University of Rostock is authorized for the purposes of «system accreditation». An internal certification system is used by the university for most accreditation procedures. The modules underwent the process of quality assurance		
<b>What will you learn:</b>		
<b>You will acquire competences:</b> <ul style="list-style-type: none"> <li>• to apply analytical tools of microeconomic theory to environmental issues</li> <li>• to apply tools of intertemporal decision making to problems involving natural resources</li> <li>• to recognize the role of economic incentives for environmental behavior and environmental policy</li> <li>• to recognize links between environmental economics and other areas of economics and to use these insights to get a deeper understanding of economics in general</li> <li>• to recognize links between environmental economics and other disciplines such as systems ecology and environmental sociology</li> <li>• to evaluate economic reasoning vis-à-vis arguments coming from other disciplines</li> <li>• participate in the societal discourse on environmental problems and environmental policies on the basis of sound economic reasoning</li> </ul>		
<b>Who is this course for?</b>		
<b>The course is:</b> Open for students from any study programme. Recommended to students of all study years, especially those who want to know more about: <ul style="list-style-type: none"> <li>• Environmental externalities and their internalization</li> <li>• Instruments of environmental policy</li> <li>• Efficiency of environmental regulation</li> <li>• Evaluation of environmental damages and environmental quality</li> <li>• Trade and the environment</li> <li>• International and global environmental problems</li> <li>• Issues of second best</li> <li>• Renewable and non-renewable resources</li> <li>• Ecological economics</li> </ul> <b>Your track in EU-CONEXUS Minors:</b> This course is especially beneficial after or before: Environmental Economics, Ocean governance and blue economy		
<b>Course activities:</b>		
Video Lectures, Online Conferences for Questions and Answers		
<b>Soft skills:</b>		
Analytical skills, problem solving, structuring of problems		
<b>Prerequisites:</b>		
Basic Microeconomics (demand, supply, the marginal principle, basic welfare analysis)		

<b>Topic:</b> Sustainable Blue Economy		
<b>Course:</b> Environmental Economics		
<b>University:</b> La Rochelle Université		
<b>6 ECTS</b>	<b>Language:</b>	English
<b>Stage of accreditation:</b> Accredited by the French Ministry of Higher Education, Research and Innovation as part of an initial degree programme at La Rochelle University.		
<b>What will you learn:</b>		
<ul style="list-style-type: none"> <li>• To understand how to value environmental amenities, dealing with the social inequalities associated with climate changes as well as the difficulty to coordinate worldwide environmental policies became inextricable issues,</li> <li>• How economics deals with these major challenges.</li> </ul>		
<b>Who is this course for?</b>		
<p><b>This course is:</b> Recommended to the students with an interest in social sciences</p> <p><b>Your track in EU-CONEXUS Minors:</b> This course is especially beneficial after or before: Entrepreneurship, Sustainable blue economy, Ocean governance and blue economy, Coastal Tourism Facing Social and Environmental Transition</p>		
<b>Course activities:</b>		
<ul style="list-style-type: none"> <li>• Group works</li> <li>• Cases studies</li> </ul>		
<b>Soft skills:</b>		
Analytical thinking; ability to understand graphical analysis; curiosity; ability to work in group		
<b>Prerequisites:</b>		
None		

<b>Topic:</b> Sustainable Blue Economy		
<b>Course:</b> <a href="#">Ocean governance and blue economy</a>		
<b>University:</b> La Rochelle Université		
<b>6 ECTS</b>	<b>Language:</b>	English
<b>Stage of accreditation:</b> Accredited by the French Ministry of Higher Education, Research and Innovation as part of an initial degree programme at La Rochelle University.		
<b>What will you learn:</b>		
<ul style="list-style-type: none"> <li>• International regulations in the marine historic exploitation sectors and Marine Environmental Governance and legal framework.</li> <li>• To discuss about Blue economy and Sustainable Development: Ocean and the UN Sustainable Development Goals (Goal 14: Conserve and sustainably use the oceans, seas and marine resources)</li> </ul>		
<b>Who is this course for?</b>		
<p><b>This course is:</b>  Open for students from any study programme  <i>Your track in EU-CONEXUS Minors:</i>  This course is especially beneficial after or before: Fisheries, Sea transport Development Basics, Bioenergy and Waste To Energy, Sustainable Transport Engineering for Coastal region</p>		
<b>Course activities:</b>		
<ul style="list-style-type: none"> <li>• Case studies</li> <li>• Group work (role playing game)</li> </ul>		
<b>Soft skills:</b>		
Openness to social issues, ability to analyse institutional systems, interest in protecting the marine environment, research, written and oral communication.		
<b>Prerequisites:</b>		
None.		

## Appendix. Courses in 2024-25 academic year

In the Table below presents all the courses that will be offered in a virtual or blended teaching mode from the academic year 2024-25.

Sector	Topic	Course	Semester	ECTS	University
Aquaculture and Fisheries	1. Sustainable Aquaculture	1.2. Aquaculture	Autumn	6	AUA
	2. Fisheries	2.1 Fisheries	Spring	6	UNIZD
Marine Biotechnology	4. Blue Biomass Applications	4.3. Blue Biomass from Obtention to Application	Spring	6	LRUniv
	5. Biotechnology of Marine Bioactive Molecules	5.1. Biotechnology of Marine Bioactive Molecules	Spring	6	AUA
		5.2. Marine Biotechnology	Autumn	6	UCV
	6. Microbial Nanobiotechnology	6.1. Introduction to Microbial Biotechnology	Autumn	6	UNIZD
		6.2. Enzymes and Microbes as Tools for Blue Biotechnology	Spring	6	LRUniv
6.3 Modern and innovative insight on industrial microbiology and biotechnology		Autumn	6	LRUniv	
Ocean energy	7. Bioenergy and Waste to Energy	7.1 Bioenergy and Waste to Energy	Autumn	6	UROS
	8. Energy from Renewable Resources I (wind, waves, tidal, currents)	8.1. Energy from Renewable Resources I (wind, waves, tidal, currents)	Spring	6	UTCB
	9. Energy from Renewable Resources II (solar, hydrothermal, biomass, osmotic, OTEC)	9.1. Energy from Renewable Resources II (solar, hydrothermal, biomass, osmotic, OTEC)	Spring	6	UTCB
Transport and Shipbuilding	10. Sustainable Development of the Maritime Economy	10.1. Sustainable Development of the Maritime Economy	Autumn	6	KU
	11. Basics of Green Shipping	11.2. Energy Transition in Shipping: Liquid Natural Gas	Autumn	6	KU

<b>Coastal and Maritime Tourism</b>	<b>12. Sustainable Transport Engineering for Coastal Region</b>	12.3. Sea Transport Development and Logistics	Autumn	6	KU
	<b>13. Sustainable Tourism Development</b>	13.1. Sustainable Tourism Development	Autumn	6	AUA
		13.2. Sustainable Tourism Development	Spring	6	KU
	<b>14. Entrepreneurship, Creativity and Innovation Management</b>	14.1. Entrepreneurship	Spring	6	AUA
		14.2. Entrepreneurship	Autumn	6	UNIZD
		14.3. Creativity and Innovation Management	Spring	6	UCV
		14.4 Entrepreneurship and innovation around sustainable tourism	Spring	6	LRUniv
	<b>15. Introduction to Underwater Archaeology</b>	15.1. Introduction to Underwater Archaeology	Spring	6	UNIZD
	<b>16. Sustainable Blue Economy</b>	16.1 Introduction to Environmental and Resource Economics	Autumn	6	UROS
		16.2 Environmental Economics	Spring	6	LRUniv
		16.3 Ocean governance and blue economy	Spring	6	LRUniv

Reminder: for fulfilling a Minor, students must select 5 courses from at least 2 different sectors (within the same Minor) and from at least 3 different universities; maximum 2 courses from home university.