

BLUE MINDS 4 TEACHERS

Online Course: BlueMinds4Teachers

Session 1: April 9, 2024 (16.00-18.30 CET)

Session 2: April 16th, 2024 (16.00-18.30 CET)

Session 3: April 23rd, 2024 (16.00-18.30 CET)



About the course

Welcome to the "BlueMinds4Teachers" online training course which aims to strengthen the skills of teachers and other educators in Ocean Literacy (OL) issues. The course has been designed through the collaboration of marine and freshwater research scientists, and experts from education and social sciences. Central to this course is the framework of Ocean Literacy which aims to link Ocean Science and Education for Sustainability to EU priorities and Missions, the Sustainable Development Goals, the UN Ocean Decade, school curricula, and the Network of European Blue Schools. At the end of the course, teachers/educators will have acquired methodologies and tools that will help teach and disseminate Ocean Literacy more effectively among their pupils/learners, the adults of the future, who will hopefully be able to assess their impact on the environment more objectively.

Teachers of primary education who possess adequate Pedagogical Content Knowledge (PCK), and are therefore aware of teaching and learning strategies, will be able to acquire sufficient Content Knowledge (CK) on marine science issues. Secondary school teachers, especially those who comes from the science disciplines and therefore have sufficient CK on relevant topics, will benefit from PCK. Regarding the social perspective addressed in the course, teachers/educators will have the opportunity to integrate blue economy concepts and blue careers into their classrooms, or in educational activities at museums, aquaria etc.

This course will help fill gaps in skills and knowledge by integrating pedagogical with scientific education, to enhance social learning, critical thinking, and scientific method. This outcome is also the gateway to the Network of European Blue Schools, a dedicated movement to educating pupils who are aware of, and passionate about, sustainable ocean management.

All sessions of the course will take place online. Links and relevant information will be sent to participants after completion of the registration process. All sessions will be recorded for further use.

REGISTRATION: PLEASE REGISTER (first come, first served) by 20th of March 2024 for all sessions [here](#)

Join us in the Facebook, LinkedIn and Instagram group using the hashtags #BlueMinds4Teachers, #EU4Ocean, #EUBlueSchools, #oceanliteracy #emsea #UniversityofZadar #cnr_ismar #imbcc #HellenicCentreforMarineResearch.

Learning objectives

Participants of the course will learn:

- a. the OL issues related to EU priorities and Missions, the Sustainable Development Goals, the UN Ocean Decade, school curricula, and the Network of European Blue Schools;
- b. how to identify ocean topics and integrate them into the school curriculum;
- c. how to develop and implement their own lesson plan through a “Find the Blue” project, in collaboration with their students/learners and local stakeholders, based on the use of participatory methods in teaching and learning processes (e.g., hands-on science, project-based learning, open schooling) to achieve European Blue Schools certification;
- d. some ways to integrate blue economy concepts and blue careers into their classrooms, museums, aquaria etc.;
- e. how to enable their students/learners to acquire the necessary skills to play an active role in a modern democratic society and participate in decision-making processes.

Participants will be provided with relevant references, resources, materials, tools, and links.

Prerequisites

The course is open to all primary and secondary school teachers (including pre-service teachers and other university students) as well as to marine science educators from non-formal educational settings such as museums, aquaria etc. English will be the official language of the course. Participants need to understand, read, and write in English.

Sessions

Session 1: Content knowledge on ocean sciences (part 1) on 9th of April 2024 (16.00-18.30 CET)

Session 2: Content knowledge on ocean sciences (part 2) and Social aspects related to blue economy concepts and blue careers on 16th of April 2024 (16.00-18.30 CET)

Session 3: Pedagogical strategies focusing on “blue” projects and activities on 23rd of April 2024 (16.00-18.30 CET)

Certification

In order to obtain the final certification, course participants must attend all sessions and, at the end of them, submit a learning pathway to develop a blue project. The deadline for submitting the lesson plan is 30 April 2024, 23:59 CET. A certificate of attendance will be provided to participants after completion of the course and evaluation of the pathway.

Course Staff



Yolanda Koulouri is a marine biologist. She is currently working as a Senior Researcher at the Institute of Marine Biology, Biotechnology & Aquaculture (IMBBC) of the Hellenic Centre for Marine Research (HCMR) in Crete Island (Greece). She has adequate experience working on research projects and writing scientific articles concerning marine biodiversity and benthic ecology, environmental assessment and monitoring, coastal zone management, artificial reefs technology for marine protected zones and recreational diving parks, ocean literacy, and citizen science. She is a founding member of the regional Mediterranean group of the European Marine Science Educators Association (EMSEA) and co-chair (2021-to date) of the Expert Working Group on Ocean Literacy of European Global Ocean Observing System (EuroGOOS). She is currently CEO of the HCMR spin-off company “Artificial Reef Innovative Applications” (ARIA). She is the representative of HCMR for EU4Ocean Coalition and Platform and also member of the Scientific Council of the IMBBC-HCMR (2021-to date). Last but not least, she is the author of popular books for kids of all ages talking about the sea and its creatures, while she has Master of Arts in Creative Writing.



Francesca Alvisi is a land and marine geologist, PhD, currently working as research scientist at the Institute of Marine Sciences of the Italian National Research Council (CNR-ISMAR) in Bologna. For about ten years she worked on sedimentology, stratigraphy, geochemistry and palynology of alluvial and lake sedimentary records to reconstruct the environment and climate of the past and recent times. In 1996, she began collaborating with the CNR studying marine coastal/shelf environments. She studies marine sedimentary processes, biogeochemical fluxes, and land-sea interactions. She also works on natural resources vs. human migration interaction in historical and current times. As an expert in Ocean Literacy, she is a mentor in schools, masters and training courses for teachers and educators, as well as a moderator of scientific and educational meetings, workshops, and round tables. Actually, she coordinates the project BlueNIGHTs (<https://bluenights.eu/>) to bring a touch of blue in the EU Researchers’ Night. She speaks English and French.



Melita Mokos is a marine biologist, PhD, an Assistant professor working at the Department of Ecology, Agronomy and Aquaculture at the University of Zadar, Croatia where she teaches at the Underwater Science and Technology undergraduate programme and Sustainable Management of Aquatic Ecosystems post-graduate programme. She was a vice president of the European Marine Science Educators Association (EMSEA) (2018-2022) and a coordinator of the regional EMSEA Mediterranean group (2015-2022). She is an ocean literacy (OL) expert, working in this field since 2015 and her OL work focuses on advancing OL in the Mediterranean basin, development of the Mediterranean Sea Literacy, the role of Ocean Literacy in sustainable management of the Mediterranean Sea ecosystems and resources, as well as importance of OL in education at different educational levels. Her research interests are ocean literacy, marine litter and blue carbon. She is engaged in science outreach working mainly with pre-school and school children.



Maria Cheimonopoulou is a biologist working at the Hydrobiological Station of Pella, a decentralized agency of the Greek Ministry of Rural Development and Agriculture. Her field of expertise is monitoring fish populations in mountainous streams and rivers and promoting management measures in collaboration with rural authorities and communities. She has been working for 12 years as a biology teacher in Greek Secondary Education and, *inter alia*, as a teacher trainer/lecturer in seminars on environmental issues and hands-on biology labs. She is an Ocean Literacy (OL) expert, a founding member of the regional EMSEA Mediterranean group (2015) and a non-formal educator focusing on promoting Environmental Literacy and especially OL in inland areas. She is committed to science outreach working with rural administrative authorities, general public and school children.



Athanasios Mogias is an Associate Professor in Environmental Education/Education for Sustainability at the Department of Primary Education, Democritus University of Thrace, Greece. His research interests and corresponding research work lie primarily in the fields of Environmental Education, Education for Sustainability, Ocean, and Climate Literacy. His targets are mainly pre-service and in-service primary and secondary education teachers' training as well as curricula and school textbook development. He is a founding member of the regional Mediterranean group of the European Marine Science Educators Association (EMSEA-Med). He has been publishing his work in international and national peer-reviewed scientific journals and conference proceedings, constantly reviewing in several national and international scientific journals, while at the same time being involved in research projects and collaborations regarding Environmental Education, Ocean Literacy, and marine ecology projects.



Evelyn Paredes Coral (Invited speaker) is a marine scientist committed to advancing the blue economy through ocean literacy initiatives. With a transdisciplinary background on marine, social, educational and behavioural sciences, she has a keen interest in understanding the connections between people and the ocean, with particular interest in people working in the blue economy. Evelyn obtained her marine science degree from Universidad Nacional Mayor de San Marcos, Peru with specialization in hydrobiology and fisheries (2011). She has, in addition, a Master in Marine and Lacustrine Science and Management with specialization on conservation biology and ecosystem management from the Free University of Brussels, Ghent University and University of Antwerp in Belgium (2017). She recently earned her PhD in Marine Sciences at Ghent University studying the connections between maritime workers and the ocean to better understand how these connections translate into sustainable practices. Besides her solid scientific background, she gained expertise in projects oriented to training and skills development for maritime professionals while she worked as Scientific Project Officer at the Marine Training Unit (Ghent University).



Silja Teege (Invited speaker) is the Managing Director of Sea Teach and a member of the legal board of EMSEA (European Marine Science Educators). She holds a Bachelor degree in Financial Administration and a master's degree in Political Science from the University of Hamburg. She has always been active in many projects and actions related to maritime and youth subjects and has run with her international team several highly successful EU projects which set out to find solutions around recognition problems of professional skipper qualifications and around training of young people from disadvantaged backgrounds. She is the initiator and writer of the prestigious BlueGeneration and Next BlueGeneration projects, which aim to bring unemployed and undecided youth into the Blue Economy by directly visiting hundreds of school classes, developing inspiring games and working closely with employers. She is also a founding member of Clean Boating, an NGO based in Mallorca that aims to raise awareness of plastic pollution in the oceans and the maritime sector to schools and the boating community.

Behind the course

The **EU4Ocean coalition** is a European Union initiative dedicated to advancing ocean literacy and fostering a deeper understanding of the vital role oceans play in our lives. It brings together diverse stakeholders, including policymakers, educators, scientists, and citizens, to promote ocean awareness and action. By organizing various activities, such as educational programs and outreach efforts, the coalition strives to empower individuals and communities to make informed decisions and take proactive measures to safeguard our oceans and combat climate change, ultimately contributing to the sustainable management of marine ecosystems in the EU and beyond.

The **Hellenic Centre for Marine Research (HCMR)** is a governmental research organisation operating under the supervision of the General Secretariat for Research and Technology (GSRT) of the Ministry for Development and Investment. The horizontal missions of HCMR are to: conserve the health of the hydrosphere so that aquatic ecosystems continue providing their services to future generations; promote sustainable exploitation of marine biological and other resources; support the regional development; sensitize the public at large on issues related to the hydrosphere and its conservation and provide advice to national, Mediterranean and EU institutional bodies on environmental sustainability and management. Organized educational activities by HCMR started in 1995 with the development of conferences and events for the public and youth. Since 2001 the Education Unit of HCMR has operated educational programs for schools of all levels, courses for students and teachers, summer lectures, summer schools, workshops etc. These programs are attended each year by approximately 2000 students. The education activities of HCMR expand throughout all levels of education from primary education to university level research aiming to promote marine and inland water science and inspire the next generation of environmentalists.

The **Institute of Marine Sciences of the National Research Council (CNR-ISMAR)** is the largest marine institute of the Italian CNR and carries out multidisciplinary/interdisciplinary research in the polar, oceanic and Mediterranean areas. CNR-ISMAR has developed a long experience in science dissemination projects, environmental education and training on Ocean Literacy issues and in activities/events to raise awareness on marine issues. CNR-ISMAR has participated in several projects in this sense including the European Researchers' Night (e.g. BlueNIGHTs, SOCIETY, SHARPER, STREETS) and Erasmus+ (BlueS_MED) projects. Since 2016, CNR-ISMAR has also been developing collaborative projects between art and science

to promote innovative approaches to the dissemination of scientific research results (e.g. Leviathan - Human and Marine Ecology; Abecedarium; Ocean Schools).

University of Zadar (UNIZD) is the largest integrated University in Croatia, which includes 27 university departments in different fields of science (natural, technical, social, humanities), providing education on three levels: undergraduate, graduate, and postgraduate. The University of Zadar is a research-oriented educational institution in which scientific research and projects, artistic creativity, study, and teaching are strongly interconnected to optimize the development of research, expertise, and arts, and to make its students fully competent for professional work based on scientific cognition and methodology, and artistic values as well. The university academic staff are highly qualified experts in the fields of humanities, social, natural, and biomedical sciences, engineering, technical, and biotechnology, which makes UNIZD competitive in leading and collaborating on numerous scientific and other professional projects. UNIZD is a member of the EU-CONEXUS - European University for Smart Urban Coastal Sustainability.

Hydrobiological Station of Pella is an agency of the Greek Ministry of Rural Development and Agriculture, established in 1964 for supporting the primary production sector in inland fisheries and aquaculture. Among its main objectives are monitoring of fish populations in mountainous streams and rivers, collaboration with rural administrative authorities and communities for establishing and enhancing ichthyofauna management measures and carrying out educational activities for fisheries professionals, schools and general public in hydrobiology topics.

Democritus University of Thrace started to run in the academic year 1974-1975. It was named after the ancient Greek philosopher Democritus, whose origin was from this region. It was the first Greek regional multi-campus university that not only served purely educational objectives but also significantly contributed to the reinforcement of the national and cultural character of the wider area in Thrace. Democritus University of Thrace is classified among the biggest Greek Universities in terms of the number of its active student population. Its mission is to cultivate and promote pedagogical sciences through academic and applied teaching and research and provide graduates with the necessary skills to ensure excellent training for their professional careers.

Disclaimer

“The BlueMinds4Teachers project is implemented by the Hellenic Centre for Marine Research, the Institute of Marine Sciences of National Research Council and the University of Zadar with the support of EU4Ocean Coalition funded by the European Commission.” The contents of this course are the sole responsibility of the authors and they do not represent the opinion of the organisations involved, nor of the European Commission (EC), which is not responsible for any use that may be made of the information contained therein.

All contents of this course, unless otherwise stated, are licensed under a Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0 DEED).