

Course Unit Title:	Marine Ecosystems, Threats and Management		
Course Unit Code:	ATSE401		
Type of course unit:	Elective		
Level of course unit:	Bachelor (1 st Cycle)		
Year of study:	3 rd or 4 th		
Semester when the unit is delivered:	5 th or 6 th or 7 th or 8 th		
Number of ECTS credits allocated:	6		
Name of lecturer:	Dr Demetris Kletou		
Learning Outcomes of the course unit:	<p>By the end of the course, the students should be able to:</p> <ul style="list-style-type: none"> • Identify and describe the main pelagic and benthic marine ecosystems, recognise and explain the marine ecosystem services. • Explain and assess how the marine environment is adversely affected by major anthropogenic pressures such as fishing and aquaculture, agriculture, industrialisation, urbanisation and tourism, exploitation of oil and gas, maritime transport that spreads alien species, marine litter. Many of these impacts are exacerbated by climate change. • Outline the international legislative framework related to marine environmental protection and IMO regulations that aim to mitigate environmental impacts from the maritime industry. • Appreciate the management challenges and evaluate various policies on protecting marine ecosystems. • Assess sustainable practices in shipping/maritime. 		
Mode of Delivery:	Face-to-face		
Prerequisites:	NONE	Co-requisites	NONE
Recommended optional program components:	NONE		
Course Contents	<p><i>Marine ecosystems</i></p> <ul style="list-style-type: none"> • Physical oceanography and marine biodiversity • Marine ecosystems, services and status of priority habitats and keystone species <p><i>State & Impacts</i></p> <ul style="list-style-type: none"> • Climate change • Fisheries and Aquaculture • Coastal developments & other land-based activities • Maritime transport • Invasive species • Marine litter • Renewable energy & Oil and Gas exploration <p><i>Management</i></p>		

	<ul style="list-style-type: none"> • International legal framework for marine environmental protection, emphasis given on the role of the Marine Environment Protection Committee (MEPC) and 2020 International Maritime Organization (IMO) regulations. • Challenges in implementing strategies and measures • Technological advances and Sustainable shipping 						
Recommended and/or required reading:							
Textbook:	Salomon, Markus, and Till Markus, eds. <i>Handbook on Marine Environment Protection: Science, Impacts and Sustainable Management</i> . Springer, 2018. Volumes 1-2, Pages 1-1023, ISBN: 978-3-319-60156-4 doi: 10.1007/978-3-319-60156-4						
Planned learning activities and teaching methods:	Lectures, discussions, presentations						
Assessment methods and criteria:	<table> <tr> <td>Mid-term Exam</td> <td>30%</td> </tr> <tr> <td>Attendance, Participation, Presentation</td> <td>10%</td> </tr> <tr> <td>Final Exam</td> <td>60%</td> </tr> </table>	Mid-term Exam	30%	Attendance, Participation, Presentation	10%	Final Exam	60%
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Language of instruction:	English						
Field Trips:	One field trip to enhance understanding of marine ecosystems and multiple anthropogenic pressures (<i>possible site: Vasiliko bay</i>)						