



KAPITAŁ LUDZKI
NARODOWA STRATEGIA SPÓJNOŚCI

Projekt współfinansowany przez
Unię Europejską w ramach
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Społecznego

UNIA EUROPEJSKA
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FUNDUSZ SPOŁECZNY



Course title		ECTS code	
Anthropogenic conversion of marine environment		7.2.0509	
Name of unit administrating study			
Faculty of Oceanography and Geography			
Studies			
faculty	field of study	type	pierwszego stopnia
Wydział Chemii	Ochrona środowiska	form	stacjonarne
		specjalty	wszystkie
		specialization	wszystkie
Teaching staff			
dr hab. Agata Weydmann-Zwolicka, profesor uczelni			
Forms of classes, the realization and number of hours		ECTS credits	
Forms of classes		2	
Lecture		classes - 30 h	
The realization of activities		tutorial classes - 2 h	
classroom instruction		student's own work - 18 h	
Number of hours		TOTAL: 50 h - 2 ECTS	
Lecture: 30 hours			
The academic cycle			
2024/2025 winter semester			
Type of course		Language of instruction	
obligatory		polish	
Teaching methods		Form and method of assessment and basic criteria for evaluation or examination requirements	
multimedia-based lecture		Final evaluation	
		Examination	
		Assessment methods	
		- written exam with open questions	
		- written exam (test)	
		The basic criteria for evaluation	
		The basic criteria for evaluation	
		Lectures – knowledge of the presented material, supplemented with the literature on the subject	
Method of verifying required learning outcomes			
Required courses and introductory requirements			
A. Formal requirements			
none			
B. Prerequisites			
Prerequisites English, level B2			
Aims of education			
Aims of education			
Acquiring knowledge and skills to assess the state of the anthropopressed marine environment, in particular about extreme and global changes, as well as the scenario of causes and consequences of changes in biocoenoses at micro- and macro-scales.			
Course contents			
Course contents			
1. Changes in marine ecosystems in the micro- and macro-scale as a result of human activities - a historical outline.			

2. The impact of anthropopression on changes in marine environment at a local scale (e.g. economic, scientific, military).
3. The impact of climate change and related phenomena on the coastal zone and functioning of marine ecosystems, with a particular emphasis to polar regions.
4. The impact of increasing eutrophication: a case study of the dynamics of short- and long-term changes in the Baltic Sea.
5. Changes in marine ecosystems caused by natural factors, changes in species ranges, cases of mass mortality in the sea; and jellyfish blooms.
6. Human impact on marine ecosystems in a local scale: invasive species; introduction of new species, pathogens and strains.
7. The use of living marine resources (fishing, whaling, aquaculture); the problem of overfishing.
8. Pollutants: organic, inorganic, heavy metals.
9. Problems related to plastic and microplastic in the sea.
10. Buildings on the sea bottom, coastline conversion, wind farms.
11. The largest marine ecological disasters.
12. Forecasts and scenarios of changes in particularly sensitive ecosystems, based on polar regions and the Baltic Sea

Bibliography of literature

Bibliography of literature

Literature required to pass the course

Extracurricular readings

- ACIA (2005) "Arctic Climate Impact Assessment - Scientific Report" 1046 pp. Cambridge University Press 2005
- Andrulowicz E. i in. „Morze Bałtyckie – o tym warto wiedzieć”, Polskie Klub Ekologiczny, Gdynia 2008
- Bolalek J. „Ochrona środowiska morskiego – od teorii do praktyki” Wyd. UG 2016
- Brodecki Z., Żmudziński L. "Morskie obszary chronione w Polsce" Centrum Biologii Morza PAN, Uniwersytet Gdański, Gdynia 1997
- Czerwiński A. „Współczesne źródła energii” Wyd. UW, 2001
- Demel K. „Życie morza” Wyd. Morskie Gdańsk, 1979
- Duxbury A.C., Duxbury A.B., Sverdrup K.A. „Oceany świata” PWN Warszawa, 2002
- HELCOM (2017) "The integrated assessment of eutrophication - supplementary report to the first version of the 'State of the Baltic Sea' report 2017"
- IPCC Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (eds, R.K. Pachauri RK, Meyer LA, Core Writing Team) IPCC, Geneva, Switzerland, 151 pp., 2014
- Korzeniewski K. „Ochrona środowiska morskiego” Wyd. UG, 1998
- Łabuz T. „Sposoby ochrony brzegów morskich i ich wpływ na środowisko przyrodnicze polskiego wybrzeża Bałtyku” Raport WWF, 2013
- Łysiak-Pastuszak E. i in. (red.) „Ocena stanu środowiska polskich obszarów morskich Bałtyku na podstawie danych monitoringowych z roku 2015 na tle dziesięciolecia 2005-2014”, Warszawa 2016
- Pawlaczyk-Szpilowa M. „Mikrobiologia wody i ścieków” PWN Warszawa, 1980
- Różańska Z. „Zasoby, zanieczyszczenia i ochrona wód morskich ze szczególnym uwzględnieniem Bałtyku” PWN Warszawa, 1987
- Thurman H.V. „Zarys oceanologii” Wyd. Morskie Gdańsk, 1988
- UNEP (2009) "Marine Litter: A Global Challenge" Nairobi: UNEP. 232 pp, 2009

The learning outcomes (for the field of study and specialization)

Knowledge

Skills

Social competence

Contact

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