

- COURSE SYLLABUS

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| 1. | Course title: <i>All you want to know about climate change and its impact from the ocean perspective</i> |
| 2. | Lecturers: <i>Tymon Zielinski, Jacek Piskozub, Jan Marcin Weslawski, Tomasz Kijewski (IO PAN)</i> |
| 3. | Field, type and level of studies, year of study: <i>Climate change, oceanography, all years of study</i> |
| 4. | Course character: <i>GeoPlanet interdisciplinary lecture</i> |
| 5. | Teaching method: <i>On-line</i> |
| 6. | Language: <i>English</i> |
| 7. | Course type and number of hours: <i>Lecture, 30h</i> |
| 8. | Estimated load of student's independent work: <i>20h</i> |
| 9. | Total workload and number of ECTS points: <i>50h, 3 ECTS</i> |
| 10. | Short description and main focus of the course: <i>Climate change and associated modification of the ocean is a fact, however, it seems to be the most undervalued and little understood "pandemic" challenge of this century. We live in a world where environmental data is increasingly being amassed and models are generating finer scale and increasingly dense numbers of outputs, resulting in the production of high level scientific information on climate and ocean. However, the knowledge generated is often inaccessible, incomprehensible and misunderstood by society. During the course we will discuss the need for sustainability actions, the role of the ocean processes in the climate system, climate change impacts on global environment and the humans.</i> |
| 11. | References: <i>on-line resources; e.g. https://www.ipcc.ch/; https://www.unesco.org/en/decades/ocean-decade; https://www.noaa.gov/</i> |
| 12. | Prerequisites: <i>None</i> |
| 13. | Educational outcomes: <u>PQF level 8 codes:</u> |

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| | <p>Knowledge: By the end of the lecture, participants will be able to:</p> <ul style="list-style-type: none"> • Explain the role of ocean processes in regulating the Earth's climate. • Describe how climate change affects ocean systems and, in turn, global environments and societies. • Identify key types of scientific data and models used to study climate–ocean interactions. • Recognize the connections between ocean changes and sustainability challenges. | P8S_WG |
| | <p>Practical Skills: By the end of the lecture, participants will be able to:</p> <ul style="list-style-type: none"> • Interpret examples of climate and ocean data in a way that highlights their societal relevance. • Critically assess the accessibility and communication of scientific knowledge related to climate and the ocean. • Apply ocean–climate knowledge to discussions of sustainability solutions and policy actions. • Summarize complex scientific concepts in clear, everyday language for wider audiences. | P8S_UW |
| | <p>Social Skills: By the end of the lecture, participants will be able to:</p> <ul style="list-style-type: none"> • Engage in informed discussions about climate change impacts from an ocean perspective. • Reflect on the role of individuals and communities in promoting sustainable actions. • Collaborate in group settings to explore solutions linking science, policy, and society. • Foster a sense of shared responsibility and agency in addressing climate–ocean challenges. | P8S_KK |
| 14. | <p>Evaluation of the educational outcomes: <i>Homework assignments</i></p> | |
| 15. | <p>Criteria to complete the course: <i>Final grade depends on the evaluation of the report</i></p> | |
| 16. | <p>Contact with the lecturer: <i>Email: tymon@iopan.gda.pl</i></p> | |