University of Gdańsk

Subject card

Subject name and code	Compounds that Deceive our Hormones – Threats of the 21st Century - lecture, PG_00205303		
Field of study	Oceanography		
Date of commencement of studies	October 2027	Academic year of realisation of subject	2029/2030
Education level	Bachelor's studies	Subject group	Obligatory subject group in the field of study Optional subject group Subject group related to scientific research in the field of study
Mode of study	full-time studies	Mode of delivery	at the university
Year of study	3	Language of instruction	Polish
Semester of study	6	ECTS credits	1.0
Learning profile	academic	Assessment form	credit
Conducting unit			
Name and surname of lecturer (lecturers)	Subject supervisor	dr Iga Nehring	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	0.0	0.0	0.0	0.0	15

E-learning hours included: 0.0

Learning activity and number of study hours

Learning activity	Participation in didactic classes included in study plan	Participation in consultation hours	Self-study	SUM
Number of study hours	15	1.0	9.0	25

Subject objectives

The aim of the course is to provide fundamental knowledge about endocrine-disrupting compounds (EDCs). The lectures will present the sources, applications, and production of these substances, as well as possible alternatives to compounds with endocrine and androgenic properties. The course will also discuss the environmental fate of these substances, with particular emphasis on aquatic ecosystems, and their impacts on organisms and the environment

Learning outcomes

Course outcome	Subject outcome	Method of verification
[OCEANL3-W01] has an advanced knowledge and understanding of the terminology used in oceanography and related exact and natural sciences (in Polish and a selected foreign language)	The student possesses knowledge of specialized terminology related to endocrine-active compounds and processes occurring in the marine environment, used in oceanography and related scientific disciplines, both in Polish and in a selected foreign language.	[SW4] test/exam - oral or written
[OCEANL3-U01] is able to use the current scientific terminology in the field of oceanography in various forms of expression	The student is able to analyze ecological problems related to the presence of endocrine-disrupting compounds in marine ecosystems and propose possible solutions, using the appropriate scientific terminology.	[SU4] test/exam - oral or written

<table>
<tr><td>Subject contents</td><td>This course introduces endocrine-disrupting compounds (EDCs) chemical substances that pose a threat to human health and aquatic ecosystems in the 21st century. Students will learn about their occurrence, effects on organisms, applications, and legal regulations, as well as basic methods for monitoring EDCs in the environment. The course provides an introduction to more advanced topics covered at the second-cycle level in Oceanography.

The course content includes:

Introduction to endocrine-disrupting compounds (EDCs) and their significance.
Inorganic and organic EDCs sources, mechanisms, and ecological impact.
Applications, alternatives, and legal regulations of EDCs.
Effects of EDCs on aquatic life and human health.
Sources of EDCs in the marine environment and wastewater treatment.
Current research trends and modern analytical methods for studying EDCs</td></tr>
<tr><td>Prerequisites and co-requisites</td><td></td></tr>
<tr><td>Assessment methods and criteria</td><td><table><tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr><tr><td>Test</td><td>51.0%</td><td>100.0%</td></tr></table></td></tr>
<tr><td>Recommended reading</td><td><table><tr><td>Basic literature</td><td>Khetan S.K. (2014). Endocrine disruptors in the environment. John Wiley& Sons

Patisaul H.B. & Belcher S.M. (2017). Endocrine disruptors, brain and behaviour. Oxford University Press.

Schug T.T., et al. (2016). Minireview: Endocrine disruptors and human health. Endocrinology, 157(12), 43614372.</td></tr><tr><td>Supplementary literature</td><td>Crinnion W.J. (2010). Endocrine disruptors: Historical perspectives and contemporary concerns. Alternative Medicine Review, 15(3), 223233.</td></tr><tr><td>eResources addresses</td><td></td></tr></table></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td>Key groups of endocrine-disrupting chemicals (EDCs), their sources, and mechanisms of action.

Proposing measures to reduce the input of EDCs into the environment.</td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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