

Course code																																	
Type and description	Elective Course																																
ECTS credit	1																																
Course name	Ecotoxicological assessment of chemicals and materials																																
Course name in Polish	Ocena ekotoksykologiczna substancji chemicznych i materiałów																																
Language of instruction	English																																
Course level	8 PRK																																
Course coordinator	Ewa Liwarska-Bizukojć																																
Course instructors	Ewa Liwarska-Bizukojć																																
Delivery methods and course duration	<table border="1"> <thead> <tr> <th></th> <th>Lecture</th> <th>Tutorials</th> <th>Laboratory</th> <th>Project</th> <th>Seminar</th> <th>Other</th> <th>Total of teaching hours during semester</th> </tr> </thead> <tbody> <tr> <td>Contact hours</td> <td>0</td> <td>0</td> <td>0</td> <td>15</td> <td>0</td> <td>0</td> <td>15</td> </tr> <tr> <td>E-learning</td> <td>No</td> <td>No</td> <td>No</td> <td>No</td> <td>No</td> <td>No</td> <td></td> </tr> <tr> <td>Assessment criteria (weightage)</td> <td>0,00</td> <td></td> <td></td> <td></td> <td></td> <td>0,00</td> <td></td> </tr> </tbody> </table>		Lecture	Tutorials	Laboratory	Project	Seminar	Other	Total of teaching hours during semester	Contact hours	0	0	0	15	0	0	15	E-learning	No	No	No	No	No	No		Assessment criteria (weightage)	0,00					0,00	
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Course objective	<ol style="list-style-type: none"> 1. Acquiring knowledge about fate of pollutants in the environment and their effect on living creatures. 2. Acquiring knowledge about testing of ecotoxicity. 3. Acquiring knowledge regarding preparation of the protocol of ecotoxicity assessment. 																																
Learning outcomes	<p>Having completed the course student can:</p> <ol style="list-style-type: none"> 1. Describe the fate and transformation of pollutants in the environment and their effect on biota (W4, K1) 2. Characterise bioindicators, endpoints and types of ecotoxicity tests (W4, U4, K1) 3. Apply the knowledge to prepare the protocol of ecotoxicity assessment (U4, K1) 																																
Assessment methods	<p>U4, K1 – project seminar presentation</p> <p>W4,, U4, K1 – project (written protocol)</p> <p>W4, K1 - discussion</p> <p>The final grade:</p> <p>Project (written protocol) - 60%</p> <p>Presentation - 30%</p> <p>Discussion – 10%</p>																																

Prerequisites	
Course content with delivery methods	<p>INTRODUCTION TO THE PROJECT</p> <ol style="list-style-type: none"> 1. Major groups of pollutants and their fate in the environment. 2. Effect of pollutants on organisms. Testing for ecotoxicity. 3. Bioindicators and endpoints used ecotoxicity tests. Ecotoxicity vs. risk assessment. <p>PROJECT</p> <p>The aim of the project is to prepare the protocol of ecotoxicity assessment for the selected chemical or material (defined type of waste or wastewater). The main stages of the project are as follows: (a) data collection; (b) characterisation of the studied object (e.g. chemical, wastewater) and its effect on organisms - identification of gaps in available ecotoxicity data; (c) discussion in the classes; (d) preparation of the written protocol and its presentation in the classes.</p>
Basic reference materials	<ol style="list-style-type: none"> 1. Newman M.C. (2019) Fundamentals of Ecotoxicology. The science of pollution. 5th ed. CRC Press; ISBN 9780815354024 2. Sparling D. W. (2017) Basics of ecotoxicology. 1st ed. CRC Press, ISBN 9781138031715 3. Begum G. (2012) Ecotoxicology. InTech, ISBN 978-953-51-0027-0
Other reference materials	Bharagava R. m. (Ed.) (2019) Environmental Contaminants: Ecological Implications and Management. Springer Nature Singapore Pte Ltd., ISBN 978-981-13-7903-1
Average student workload outside classroom	10 h
Comments	Not applicable
Last update	26.04.2023