

<b>Course title:</b> Environmental radiochemistry		<b>Kod ECTS</b>		
<b>Studies:</b>				
<b>Specialty</b>	<b>Semester</b>	<b>Number of ECTS</b>	<b>Number of hours in the class</b>	<b>Form</b>
<b>Foreign students</b>	<b>summer</b>	<b>4</b>	<b>15 30</b>	<b>Lecture laboratory</b>
<b>Name of lecturer:</b> dr hab. Dagmara Strumińska-Parulska, prof. UG; mgr Aleksandra Moniakowska				
<b>Objective of the course (expected learning outcomes and competences to be acquired):</b>  To understand types of nuclear decays and reactions and know radiometric methods in radiochemistry, To describe natural and artificial radionuclides in the natural environment, To understand genetic and somatic effects of ionizing radiation, To know basics of radiological protection, To understand the nuclear power plants dilemmas, To know the impact of Chernobyl and Fukushima accidents,				
<b>Prerequisites:</b> Basic knowledge of inorganic chemistry and analytical chemistry.				
<b>Teaching methods:</b> Lecture with multimedia presentation				
<b>Course content</b> Activity and its units. Nuclear decays and reactions. Natural and anthropogenic radioactivity. Radioactivity impact on development and evolution of Earth life. Sources and distribution of natural and artificial radionuclides. Radiometric methods in radiochemical analysis of natural and artificial radionuclides in environmental samples. Ionizing radiation influence. Dosimetry and its units. The Chernobyl and the Fukushima accidents and their influence on the environment. Nuclear energy and radioactive waste.				
<b>Recommended reading:</b> Dahlgaard H., Nordic Radioecology: The Transfer of Radionuclides through Nordic Ecosystems to Man, Elsevier, 1994, Matishov D., Matishov G., Radioecology in Northern European Seas, Springer, 2004, Skwarzec B., Determination of radionuclides in aquatic environment, Analytical measurements in aquatic environments, CRC Press, Taylor&Francis Group, 2010,				
<b>Assessment methods:</b> Writing exam				
<b>Language of instruction:</b> English				
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