

<b>Course:</b> <b>ENVIROMENTAL CHEMISTRY</b>	<b>Course type:</b> seminar	<b>Credits:</b> 4	<b>Course ID:</b> <b>KTAK111</b>
<b>Course responsible:</b> Dr. Kerekes Zsuzsanna	<b>Programme type:</b> full time	<b>Hours/Semester:</b> 8+2	<b>Assessment:</b> exam
<p>Course objectives: Environmental chemistry is the branch of science which deals with the chemical changes in the environment. Thus the major component in our environment is air, water, soil, and sunlight, which present in our surroundings.</p> <p>We study broadly our environment contain mainly three main components which are</p> <ol style="list-style-type: none"> <li><b>1. Abiotic components of our environment:</b> Any non-living component which used or present in our ecosystem is known as abiotic components. Thus sunlight, oxygen, nitrogen, temperature, pH, and water is the non-living components present in our environment. These nonliving components present in the lithosphere or atmosphere.</li> <li><b>2. Biotic components of environment</b> Biotic components are the living component in our environment. Thus plants, animals including man are the abiotic components present in our environment.</li> <li><b>3. Energy components of the environment</b> Energy components are globally leading end-to-end</li> </ol>			
<p><b>Competencies to be improved:</b></p> <p>Knowledge: T7          Ability: K8          Attitude: A4          Autonomy and responsibility:F2</p>			
<p><b>Compalsory literature:</b></p> <p>- <b>Recommended literature:</b></p> <ul style="list-style-type: none"> <li>- Kiss F.-Vallner J.: Környezeti kémia (Segédlet)1999</li> <li>- <a href="http://www.nyf.hu/others/html/kornyezettud/kornykem/nyitolap.htm">http://www.nyf.hu/others/html/kornyezettud/kornykem/nyitolap.htm</a></li> <li>- Papp S.-Rolf K.: Környezeti kémia.2004.</li> <li>- Kiss F.-Vallner J.: Segédlet a laboratóriumi gyakorlathoz I, 21004.</li> <li>- Peter O'Neill: Enviromental chemistry. 1993.</li> </ul> <p>Stanley E. Manaham. Enviromental chemistry.2000  <a href="https://www.researchgate.net/publication/325361381">https://www.researchgate.net/publication/325361381</a> <i>An introduction to Environmental Chemistry</i></p>			
<p><b>Course content:</b></p> <p>1. The concept, object and task of environmental chemistry. 2. Environmental chemistry of macronutrients that r up living organisms. 3. General characterization of hydrogen. Hydrogen powered internal combustion engines. 4. Hydrogen as an energy carrier, fusion power plant, fuel cell. 5. General characterization and circulation of oxyge Stratospheric and tropospheric ozone. 7. The ozone hole as an environmental problem. 8. General characterizatio and circulation of water. 9. Water contaminants and their effects. 10. Use and preparation of water. 11. Sewage treatment. 12. General characteristics and cycling of carbon. 13. The greenhouse effect and global warming.</p> <p><b>Course requirements:</b> attendance at classes,</p> <p><b>Grading scale:</b>          &gt;91 excellent, 81-90 good, 70-80 satisfactory, 60-69%:pass</p>			
<b>Course Programme:</b> WJLF ENVIRONMENTAL SCIENCE	<b>Semester:</b> 2. semester	<b>Lecturer:</b> Dr. Kerekes Zsuzsanna lecturer	
<p><u>hydrocarbon production</u> data management and accounting software, tracking hydrocarbons for production and transport to sales for revenue generation.</p>			

