

Title of the course: Remote sensing and geographic information science (GIS) in water management	NEPTUN-code: RKWTV1EBNE	Teaching hours: 2+0+2 Semester: 6	Credit: 5 Exam type: midterm grade
Course leader: Krisztina Demény PhD	Position: assistant professor	Required preliminary knowledge: RKXTI1ABNE – Geoinformatics (GIS)	
Curriculum:			
The basics of remote sensing and the practical field of application. The physical basics of the remote sensing and the methods of data processing and its practical application. Data processing of the remote sensed pictures using GIS software. The change of land usage based on remote sensing and monitoring, vegetation analysis, runoff proportions, soil science conditions, internal water risk analysis and its practical appliance.			
Professional competencies:			
<p>Knowledge of the detailed analysis of the specific field's cognition and its different specialities, the exploration of overall and special coherencies, furthermore the evaluative draughting and report making with the result of the analysis.</p> <p>The students know and be able to apply the up-to-date IT devices, furthermore they can achieve an effective professional verbal and written communication.</p> <p>Knowledge of the main methods for analyse quality and quantity characteristics of the environmental elements and systems, their typical equipment and their limits, furthermore the methods for evaluating data.</p> <p>The students will be able to take part in environmental protection expert, consultant and decision preparational work. They will be able to apply the land-use change, vegetation analysis, drainage rate, soil science conditions, internal water risk analysis based on remote sensing.</p> <p>They possess the monotony-tolerance and corresponding strength for executing practical activities.</p>			
Bibliography:			
<p>Cazenave, A., Champollion, N., Benveniste, J., Chen, J. (Eds.) (2016): Remote Sensing and Water Resources, Springer Kiadó</p> <p>Diaz-Delgado, Ricardo, Lucas, Richard, Hurford, Clive (Eds.) (2017): The Roles of Remote Sensing in Nature Conservation, Springer Kiadó</p> <p>Bajjali, William(2018): ArcGIS for Environmental and Water Issues, Springer Kiadó</p>			
Comment:			