



JOHN WESLEY THEOLOGICAL COLLEGE
COURSE THEMATICS

Course: Water protection and management	Course type: Lecture+seminar	Credits: 2	Course ID: KTAK252
Course responsible: András JÁNOSSY, Dr.	Programme type: part time	Hours/Semester: 10	Assessment: exam
Course objectives: To acquire the necessary conceptual competence and understanding for the future studies to be based on.			
Competencies to be improved: Knowledge: T3 Ability: K3 Attitude: A1; A2 Autonomy and responsibility: F3			
Compulsory literature: The relevant articles in Wikipedia and on the water portal of the European Commission. Recommended literature: “ <i>Fitness Check Evaluation of the Water Framework Directive and the Floods Directive Executive Summary</i> ” < https://ec.europa.eu/environment/water/fitness_check_of_the_eu_water_legislation/documents/Study%20report%20exec%20summary%20EN%20%20-%20TRI%20TEC6327EU.pdf >			
Course content: a. Hydrological cycle; water bodies as receivers of effluents; self purification; mineralisation; benthos. b. The three main categories of river stretches; river evolution; subsurface water bodies; mechanisms of the soils’ water balances. c. Drought; rainwater harvesting; water storage; flood protection; floodplain drainage systems; inter-basin transfer of water. d. Transportational and hydroenergetical utilization of rivers in the system of water management policy. e. Water supply, wastewater treatment, agriculture irrigation, industrial water supply, road irrigation. f. International agreements and bodies: the Helsinki Water Convention (“on the Protection and Use of Transboundary Watercourses and International Lakes”), the Sofia Convention (“on Co-operation for the Protection and Sustainable Use of the River Danube”, the ICPDR (International Commission for the Protection of the Danube River). g. EU programmes: the Water Framework Directive (plus the Groundwater Directive, plus Environmental Quality Standards Directive), Floods Directive, Strategy for Water Scarcity and Droughts - Blueprint to safeguard European waters. h. WFD notions: hierarchical systems of catchments (drainage basins); river quality characteristics, pollution parameters; (heavily) modified water bodies; water quality objectives. i. River Basin Management Plan components: programme of measures; structural and non-structural methods. j. EU wide Common Implementation Strategy; ICPDR coordinated Danube Basin River Management Plan and Flood Risk Management National Water Catchment Management Plans. EU Water Legislation - Fitness Check: an expert consultation, run in parallel with an online public consultation (opened on July 27, 2021) on integrated water management. k. EU level and national implementing authorities, standing planning, advisory and public consultation bodies. l. The Hungarian Water Catchment Management Plan and Flood Risk Management Plan. The Jenő Kvassay National Water Strategy. m. The European and the Hungarian flood events forecasting methodology. Hungarian legal regulations connected to the estimated 100-year river flood levels. n. River channel maintenance plans; watercourse maintenance facilities; works/water approval and licensing process Schedule: 1 = a, b, c, d; 2 = e, f; 3 = g; 4 = h; 5 = i; 6 = j; 7 = k; 8 = l; 9 = m; 10 = n.			
Course requirements: Submission of 10 assignments prior to the class scheduled (max 30%); activity at classes (max 20%); exam (max 50%). Attendance of a class is conditional on having the assignment submitted. Admission to the exam is conditional on class attendance. In addition to the material of the assignments, that of the lectures delivered at the classes also belong to the subject-matter of the exam.			
Grading scale: >80 %: excellent, 60-79 %: good, 40-59 %:satisfactory, 20-39 %:pass			
Course Programme: WJLF ENVIRONMENTAL SCIENCE	Semester: 2021-22_1 (Autumn)	Lecturer: András JÁNOSSY, Dr.	