Faculty of Metalurgy and Technology / ENVIRONMENTAL PROTECTION / WATER MANAGEMENT

Course:	WATER MANAGEMENT			
Course ID	**Course status**	**Semester**	**ECTS credits**	**Lessons** (Lessons+Exercises+Laboratory)
12304	Mandatory	1	8	3+2+0
Programs	ENVIRONMENTAL PROTECTION			
Prerequisites	There is no conditioning to other subjects.			
Aims	Through the subject, the student acquires basic knowledge about water resources management.			
Learning outcomes	1. Defines key categories in the area of water in sustainable development planning. 2. Explain water management in the catchment area. 3. Defines the basic elements of integral management of water resources. 4. Uses acquired theoretical knowledge when creating the Water Management Foundation. 5. Uses legal regulations in water management processes. 6. It has an ecologically educational effect in the living and working environment			
Lecturer / Teaching assistant	Milena Tadić, Assoc. Prof.			
Methodology	Lectures, exercises, seminar work, consultations.			
Plan and program of work				
Preparing week	Preparation and registration of the semester			
I week lectures	Water crisis and sustainable development. The specifics of the water crisis, key long-term strategic decisions.			
I week exercises	Development of river basin management plans.			
II week lectures	Water as a condition of life, as a natural resource, as a factor of economic growth, as a social factor of development.			
II week exercises	Development of river basin management plans.			
III week lectures	Defining water management. Specificities in water management.			
III week exercises	Development of river basin management plans.			
IV week lectures	Catchment area as the basic unit for water management. World Water Management Strategy.			
IV week exercises	Methodologies for determining the status of surface and underground waters.			
V week lectures	Characteristics of water types as parameters in water management. Basic principles of water management.			
V week exercises	Methodologies for determining the status of surface and underground waters.			
VI week lectures	Dublin Declaration. Water Framework Directive.			
VI week exercises	Methodologies for determining the status of surface and underground waters.			
VII week lectures	Water management systems and stages of their development. Management of water management systems and their peculiarities.			
VII week exercises	Midterm exam.			
VIII week lectures	Basic water management categories important for system planning. Water mode. Water management postulates.			
VIII week exercises	Makeup midterm exam.			
IX week lectures	Water management areas and branches.			
IX week exercises	Presentation of seminar work.			
X week lectures	Integral water management. Basic elements of the system of integral management of water resources.			
X week exercises	Presentation of seminar work.			
XI week lectures	Functions in water management. Organization of the national water management system.			
XI week exercises	Presentation of seminar work.			
XII week lectures	Water management information systems.			
XII week exercises	Company visit.			

XIII week lectures	Position and role of monitoring in water management.
XIII week exercises	Company visit.
XIV week lectures	Water in Montenegro.
XIV week exercises	Company visit.
XV week lectures	Principles of integral protection of surface and underground waters in Montenegro. Water quality management in the light of legal regulations.
XV week exercises	Company visit.
Student workload	Weekly: 8 ECTS x 40/30 hour = 10 h 40 min The total load for the semester = 240 h

Per week	**Per semester**
8 credits x 40/30=10 hours and 40 minuts 3 sat(a) theoretical classes 0 sat(a) practical classes 2 excercises **5 hour(s) i 40 minuts** of independent work, including consultations	Classes and final exam: **10 hour(s) i 40 minuts x 16 =170 hour(s) i 40 minuts** Necessary preparation before the beginning of the semester (administration, registration, certification): **10 hour(s) i 40 minuts x 2 =21 hour(s) i 20 minuts** Total workload for the subject: **8 x 30=240 hour(s)** Additional work for exam preparation in the preparing exam period, including taking the remedial exam from 0 to 30 hours (remaining time from the first two items to the total load for the item) **48 hour(s) i 0 minuts** Workload structure: **170 hour(s) i 40 minuts (cources), 21 hour(s) i 20 minuts (preparation), 48 hour(s) i 0 minuts (additional work)**
Student obligations	Students are required to attend lectures, exercises, present a seminar paper, do midterm exams and final exam.
Consultations	12:00-13:00, Friday
Literature	1. Bajčetić M., Value system of the water industry, Prometej, Novi Sad, 2010. 2. Kupusović T., Water management - lectures at the postgraduate study, Institute of Hydrotechnics, Faculty of Civil Engineering, University of Sarajevo, 2000. 3. Dalmacija B., Water quality control within quality management, Novi Sad, 2000. 4. Bogdanović S., EU Water Framework Directive, Novi Sad, 2005.
Examination methods	- Activity during exercises: (0 - 5 points), - Seminar work: (0 - 15 points), - Midterm exam: (0 - 30 points), - Final exam : (0 - 50 points), A passing grade is obtained if at least 50 points are accumulated cumulatively.
Special remarks	/
Comment	/

Grade:	F	E	D	C	B	A
Number of points	less than 50 points	greater than or equal to 50 points and less than 60 points	greater than or equal to 60 points and less than 70 points	greater than or equal to 70 points and less than 80 points	greater than or equal to 80 points and less than 90 points	greater than or equal to 90 points