MODULE INFORMATION SHEET

Name of Module Unit	**Water Safety Planning**
Name in Polish	Plany Bezpieczeństwa Wody
Module type	~~compulsory~~ / elective
Form of studying	full-time day courses
Level of study	graduate course (M.Sc. level)
Type of study (for extra-mural courses)	-
Programme	Environmental Engineering
Speciality	Environment Protection Engineering
Responsible department	Dept. of Water Supply and Wastewater Management
Responsible person	dr inż. Klara Ramm

Semester	Lectures(E)	Tutorials	Laboratory	Computer Exercises	Projects	ECTS
3	15	30				3

Learning outcomes (knowledge, skills, competences)

Knowledge: Student has extensive knowledge of risk assessment and risk management methods in the water supply industry.
Skills: Student is able to carry out a risk assessment for selected elements of the water supply system. Student can read the professional press and prepare an oral presentation on selected environmental engineering issues.
Competences: Student is able to work both in a team and independently to carry out a specific task, understanding its importance. Student is aware of the importance of non-technical aspects and effects of engineering activities, including its impact on the environment and the related responsibility for decisions.

Prerequisites

Basics of operation, maintenance and technologies of collective water supply systems.

Rules for integrated grade setting

0.4*L + 0.6*Tut.

Recommended readings

World Health Organization: Water safety plan manual: step-by-step risk management for drinking-water suppliers, second edition. 2024

Contents of lectures (syllabus)

	Topics	**Time** (hrs.)	**Scope** (S / Ex)
1	The concept of threat, hazardous event, and risk in water management.	2	Ex
2	EU law related to risk management and resilience of critical infrastructure.	2	Ex
3	Contemporary conditions related to risk management (climate change, intentional and unintentional human actions, pollution,	4	Ex

	quantitative and qualitative problems, etc.)		
4	Concepts related to risk analysis and assessment for drinking water supply zones.	2	Ex
5	Legal basis, procedures, standards, and guidelines for risk assessment and management in the drinking water supply system (intake, treatment, network, retention).	2	Ex
6	WHO Guidelines on Water Safety Plans.	3	Ex
	Total	**15**	**hours**

S – topics listed in the legal study programme standards from 12.07.2007
Ex – extended topics

Lecturers

dr inż. Klara Ramm

Assessment method

Written test or oral exam.

Contents of tutorials

	Topics	**Time** (hrs.)	**Scope** (S / Ex)
1	Development of the Water Safety Plan for a selected drinking water supply system: data acquisition and analysis, identification of deficiencies, ranking of dangerous events, development of a risk matrix based on hazardous events and risk analysis.	20	Ex
2	Group work and presentation of results	10	Ex
	Total	**30**	**hours**

S – topics listed in the legal study programme standards from 12.07.2007
Ex – extended topics

Persons responsible for tutorials

dr inż. Klara Ramm

Assessment method for tutorials

Active participation in classes, carrying out project tasks; assessment of reports; oral presentations of results.