D_EORM- Environmental and occupational risk management

Course specification			
Course title	Environmental and occupational risk management		
Acronym	EORM		
Level	BA (Bachelor studies)		
Study programme	**Environmental Engineering**		
Module	/		
Lecturer (for classes)	Dr Maja B. Djolic		
Lecturer/Associate (for practice)	Dr Maja B. Djolic		
Lecturer/Associate (for OTC)			
ESPB	**4.0**	**Status**	
Condition		Condition	Passed all courses from the first year.
The goal	Understanding basic concepts and problems related to risk management in general, and in particular for environmental and occupational safety. Case studies and analysis of accidents in the industry, their causes and consequences, as well as the possibilities for their elimination or minimization.		
The outcome	Knowledge of techniques, technologies and organizational measures aimed at preventing accidents that can endanger the environment, people and property, and minimizing their effects if they occur.		
Contents			
Contents of lectures	Definitions of risk, hazard, accident and disaster. Concept and classification (L1); Environment and occupational safety. Environmental Protection. Quality management (L2); International legal regulations for risk management. Relevant international standards (ISO 14000, ISO 18000, ISO 31000, ISO 45001) and guidelines for their implementation. (L3), Risk management: identification, assessment and risk control. Risk management models (L4); Methods for technical risk assessment. Methods for human reliability assessment - analysis, presentation and assessment of human error (L5-6), Chemical hazard, safe storage and handling of chemicals. Registration, evaluation and purpose of chemicals (L7);		

	Integrated environmental monitoring. Detection, identification, routes of exposure to chemical agents and routes of degradation of environmental media (L8); Advanced information techniques for simulating environmental and risk processes (L9-10); Case studies of accidental situations in the industry and environment, their causes and consequences, as well as the possibilities for their elimination or minimization (L11). Innovations in environmental and occupational risk management (L12).
Contents of exercises	Examples of analytical techniques and methods used in monitoring the quality of the environment (E1), Examples of information techniques and methods used in monitoring the quality of the environment (E2), Interpretation of standard requirements in industrial practice (E3), Interpretation of technical risk management measures; Interpretation of human error assessment measures (E4), Analysis and comparison of risk management models, application in practice (E5), Discussion, presentation of seminar papers (E6)

Literature

Literatre: Lerche, W. Glaesser: Environmental Risk Assessment, Springer Verlag, Berlin, ISBN: 978-3-540-26249-7, 2006 (Original title); C. Perrow: Normal Accidents: Living with High-Risk Technologies, Princeton University Press, ISBN-13: 978-0691004129; European Environmental Agency, The application of environmental risk assessment in industry (https://www.eea.europa.eu/publications/GH-07-97-595-EN-C2/chapter7h.html)

Number of hours per week during the semester/trimester/year

Lectures	Exercises	OTC	Study and Research	Other classes
2	1			

Semester	Fall Semester
Methods of teaching	Lectures (ppt presentations) and practical part (which includes literature review related to a risk management technique or an analysis of specific incident situation - Case study)
Assessment methods	Seminar and oral exam
Mode of Teaching	Distant (remote) / On site (physical)
Language of instruction	English
Prerequisites	Knowledge of English language

Knowledge score (maximum points 100)

Pre obligations	Points	Final exam	Points
Activites during lectures		Test paper	
Practical lessons		Oral examination	40

Projects		
Colloquia		
Seminars	60	

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