

Course title	Risk Assessment, Management and Communication				
Course code	OSH605				
Course type	Compulsory				
Level	Master (2 nd Cycle)				
Year / Semester	1 st Year/ 1 st semester				
Teacher's name	TBA				
ECTS	10	Lectures / week	3 hours / 14 weeks	Laboratories / week	N/A
Course purpose and objectives	<p>The objective of Risk Assessment & Management with a focus on the emergency and security domain aims at equipping students with the necessary theoretical and practical information on managing risks. A holistic risk context analysis will be provided, with an emphasis on Risk Perception, Risk Assessment, Risk Management and Risk Communication. The importance of Risk Perception and weak signals will be discussed. Risk communication as the absolute channel of information regarding risks in a National and Organizational level will be discussed. Advanced techniques in risk assessment, deterministic, mathematical, statistical, probabilistic and stochastic will be introduced. Generation of Risk Management Options as an outcome of a thorough Risk Assessment will be offered. Students will benefit from exposure to real life scenarios of past emergency and security incidents will be provided.</p>				
Learning outcomes	<p>Upon successful completion of this course, students should be able to:</p> <ul style="list-style-type: none"> • Develop techniques on understanding weak signals as an accident precursor • Develop techniques in identifying risk perception in an organizational and national level • Apply emergency and security legislation in the development of qualitative risk assessments • Use effectively statistical distributions in order to construct data collection mechanisms for analysis • Compute statistical, probabilistic and stochastic risk assessment techniques • Apply a life-cycle risk evaluation model to designed technical systems and processes • Link and implement the results of a risk assessment in practice • Make and advise on risk decisions • Use lessons learnt from the risk assessment exercise in order to mitigate risk across a number of scenarios 				

	<ul style="list-style-type: none"> • Make the connection between the results of a thorough risk assessment and the generation of risk management options • Develop and communicate risk assessment results • Make the link between risk and insurance 		
Prerequisites	None	Corequisites	None
Course content	<p>Risk Assessment & management will help students differentiate between the various risks and the different ways of dealing with them. The presence of major hazards, and the possible impact of a major hazard accident, may dictate the use of probabilistic – stochastic methods in addition to heuristic and deterministic techniques. The relevance of legislation and the existing body of knowledge on cause-effect behaviour of hazards in the development of deterministic risk assessments will be made apparent throughout the course, as will the need for up-to-date quantitative information in building up probabilistic – stochastic models. Results of risk assessment exercises and their use in risk management will be illustrated.</p>		
Teaching methodology	Face-to-face		
Bibliography	<p>Required Readings:</p> <p>The Routledge Companion to Risk, Crisis and Emergency Management, Kurt J. Engemann , Routledge</p> <p>Security Risk Management Body of Knowledge, Julian Talbot, Wiley</p> <p>Recommended Readings:</p> <p>Natural Catastrophe Risk Management and Modelling: A Practitioner's Guide, Matthew Foote, Wiley-Blackwell</p> <p>Introduction to Emergency Management, Jane Bullock, Elsevier</p> <p>Risk Assessment: Tools, Techniques, and Their Applications, Latest Edition Lee T. Ostrom, Wiley</p> <p>Quantitative Risk Assessment - The Scientific Platform, Terje Aven, Cambridge University Press</p> <p>The SAGE Handbook of Risk Communication Hyunyi Cho, SAGE</p>		
Assessment	<p>Examinations 50%</p> <p>Class Participation and Attendance 10%</p> <p>Project 40%</p>		
Language	English		