SYLLABUS

1. Information regarding the programme

1.1 Higher education institution	Babeş-Bolyai University of Cluj-Napoca
1.2 Faculty	Faculty of Environment Science and Engineering
1.3 Departament	Departament of Environmental Analysis and Engineering
1.4 Field of study	Environmental Engineering
1.5 Study cycle	Bachelor
1.6 Study programme / Qualification	Environmental Engineering

2. Information regarding the discipline

2.1 Name of the discipline	Risk assessment and disaster management						
2.2 Course coordinator	Prof. PhD Alexandru Ozunu						
2.3 Seminar coordinator	Prof. PhD Alexandru Ozunu						
2.4 Year of study	4	2.5 Semester	8	2.6. Type of evaluation	C	2.7 Type of discipline	Non-compulsory

3. Total estimated time (hours/semester of didactic activities)

3.1 Hours per week	4	Of which: 3.2 course	2	3.3 seminar	2
3.4 Total hours in the curriculum	56	Of which: 3.5 course	28	3.6 seminar	28
Time allotment:					hours
Learning using manual, course support, bibliography, course notes					10
Additional documentation (in libraries, on electric platforms, field documentation)					12
Preparation for seminars/labs, homework, papers, portfolios and essays					10
Tutorship					8
Evaluation					2
Other activities:					-

3.7 Total individual hours	42
3.8 Total hours per semester	98
3.9 Number of ECTS credits	4

4. Prerequisites (if necessary)

4.1 curriculum	•
4.2 competencies	•

5. Conditions (if necessary)

5.1 for the course	• requires digital projector and laptop
5.2 for the semninar	• requires digital projector and laptop

6. Specific competencies acquired

Professional competencies	• emergency management; • vulnerability assessment; • emergency preparedness; • analyzing and investigating emergencies; • emergency planning; • decision-making; • risk communication.
Transversale competencies	• acquiring knowledge of how to prepare a research project; • teamwork.

7. Objectives of the discipline (outcome of the aquired competencies)

7.1 General objectives of the discipline	• acquiring knowledge and skills necessary for a specialist in emergency management
7.2 Specific objectives of the discipline	• acquisition of general knowledge of national and European legislation on risk and emergency management; • detailed knowledge of the content, meaning and issues of the emergency management system; • study and knowledge of methods and techniques for drawing up internal and external emergency plans.

8. Content

8.1 Course	Teaching methods	Remarks
1. Introduction: generalities, the disaster management cycle, domestic and international legislative aspects, definitions and terms used in emergency management (EM). National emergency management system.	lecture, interactive discussions	
2. Civil Protection - EU Civil Protection Mechanism (UCPM)	lecture, interactive discussions	
3. National and international partners in emergency management. National Red Cross Societies and the International Federation of Red Cross and Red Crescent Societies (IFRC)	lecture, interactive discussions	
4. Hazard and vulnerability in emergency management.	lecture, interactive discussions	
5. National Platform for Disaster Risk Reduction (DRR).	lecture, interactive discussions, brainstorming	

6. Perception, awareness and communication	lecture, interactive discussions	
7. Early warning		
8. Emergency response	Interactive discussions, brainstorming	
9. Disaster defense and response plans	lecture, interactive discussions,	
10. People evacuation - evacuation plans	lecture, interactive discussions,	
11.Project SPHERE. Getting back to normal.	lecture, interactive discussions,	
12. Using IT technologies in the response phase of disaster management	lecture, interactive discussions,	
13.Population preparedness	lecture, interactive discussions,	
14. Summarized course. Discussion of the specialized literature.	lecture, interactive discussions,	

Bibliography

1. European Council Directive on the major accident hazards of certain industrial activities, Directive 82/501/EEC, 24 June 1982, European Community, Brussels, Belgium
2. EPSC, 1994, Safety Management Systems: Sharing Experiences in Process Safety (Institution of Chemical Engineers, Rugby, UK)
4. OSHA, 1992, Process Safety Management of Highly Hazardous Chemicals, Title 29, Code of Federal Regulations (Occupational Safety and Health Administration, Departament of labor, Washington, DC, USA)
5. Bob Skelton: Process Safety Analysis. An Introduction, Institution of Chemical Engineers, United Kingdom, 1997.
6. Bâldea, M. – Răspuns la urgenţe: planificare, coordonare, comunicare, Editura Reprograph, Craiova, 2006
7. Blaikie, P., Cannon T., Davis, I., Wisner, B. (1994), At Risk: Natural Hazards, People's Vulnerability and Disasters, Routledge, London
8. Walker, G., Simmons, P., Irwin, A., Wynne, B., - Risk communication, public participation and the Seveso II Directive, Journal of Hazardous Materials, Volume 65, Issues 1-2 , 1 March 1999, Pages 179-19
9. Lege nr. 481 din 08/11/2004 privind protecţia civilă.
10. Norma metodologică din 16/05/2005 privind elaborarea planurilor de urgenţă în caz de accidente în care sunt implicate substanţe periculoase.
11. Ordonanţă nr.88 din 30 august 2001 privind înfiinţarea, organizarea şi funcţionarea serviciilor publice comunitare pentru situaţii de urgenţă.
12. Birkmann, J. (Ed.), (2006), Measuring Vulnerability to Natural Hazards—Towards Disaster-Resilient Societies. United Nations University, Tokyo, New York.
13. Renn, O., (2009), Risk Communication: Insights and Requirements for Designing Successful Communication Programs on Health and Environmental Hazards, în Handbook of risk and crisis communication/Robert L.Heath and H.Dan O'Hair, editors.—1st ed.
14. Villagrán De León, Juan Carlos, (2006), Vulnerability: A Conceptual and Methodological Review, Studies of the University: Research, Counsel, Education, Publication Series of UNU-EHS, No.4/2006
15. CRAIM Guidelines - Risk Management Guide for Major Industrial Accidents intended for Municipalities and Industries, Conseil pour la réduction des accidents industriels majeurs (CRAIM), 2002 Edition - PDF Version 1
16. Hotărâre nr. 308 din 09/05/1995 privind organizarea şi funcţionarea activităţii de pregătire în domeniul apărării civile
17. ISDR (2004), Living with Risk: A global review of disaster reduction initiatives, International Secretariat for Disaster Reduction, Geneva

18. Ordonanţă de urgenţă nr. 21 din 15/04/2004 privind Sistemul Naţional de Management al Situaţiilor de Urgenţă
19. United Nations Environment Programme, (1988), Awareness and Preparedness for Emergencies at Local Level: a Process for Responding to Technological Accidents, ISBN 92-807-1183-0

8.2 Seminar	Teaching methods	Remarks
1. Presentation of the specific topic, bibliography and content of individual work projects.	lecture, interactive discussions, brainstorming	
2. Methods of intervention and response in the event of an emergency (case studies).	lecture, interactive discussions, brainstorming	
3. Application : Organization of an operational centre for EM - floods	Field visit	
4. Visit to the "Avram Iancu" Emergency Inspectorate of Cluj County.	Filed visit	
5. Individual project and analysis of results.		- project presentations

Bibliografie

1. Covello, V.T. “Trust and Credibility in Risk Communication”, Health and Environment Digest, April 1992, 6 (1), pp. 1-3.
2. Brauch, H.G., (2005), Threats, Challenges, Vulnerabilities and Risks in Environmental and Human Security, United Nations University, nr. 1/2005
3. Michael Regester, Judy Larkin, "Managementul crizelor şi al situaţiilor de risc", Ed.Comunicare Ro, Bucureşti, 2003.
4. H. G. 1492/2004 privind principiile de organizare, funcţionare şi atribuţiile serviciilor de urgenţă profesioniste.
7. Ordinul nr. 638/420 din 2005 al M. A. I. /M. M. G. A. pentru aprobarea Regulamentului privind gestionarea situaţiilor de urgenţă generate de inundaţii, fenomene meteorologice periculoase, accidente la construcţii hidrotehnice şi poluări accidentale.
9. Birkmann, Joern, (2007), Risk and vulnerability indicators at different scales: Applicability, usefulness and policy implications, Environmental Hazards 7 (2007) 20–31, ELSEVIER
10. Thywissen, Katharina (2006), Components of Risk, United Nations University, UNU-EHS Institute for Environment and Human Security, No. 2/2006, ISBN: 3-9810582-1-6 162.
11. Hotărâre nr. 548 din 21/05/2008 privind aprobarea Strategiei naţionale de comunicare şi informare publică pentru situaţii de urgenţă
12. Hotărâre nr. 2288 din 09/12/2004 pentru aprobarea repartizării principalelor funcţii de sprijin pe care le asigură ministerele, celelalte organe centrale şi organizaţiile neguvernamentale privind prevenirea şi gestionarea situaţiilor de urgenţă
13. Ordinului Ministrului Administraţiei şi Internelor nr. 718/2005 pentru aprobarea Criteriilor de performanţă privind structura organizatorică şi dotarea serviciilor voluntare pentru situaţii de urgenţă
14. Ordinul Ministrului Administraţiei şi Internelor nr. 712/2005 privind instruirea salariaţilor în domeniul situaţiilor de urgenţă, modificat şi completat prin OMAI nr.786/2005
15. ORDIN nr. 673 din 9 decembrie 2008 al ministrului internelor şi reformei administrative privind pregătirea în domeniul situaţiilor de urgenţă a reprezentanţilor instituţiilor prefectului şi a personalului cu funcţii de conducere din administraţia publică locală, în perioada 2009-2012

9. Corroborating the content of the discipline with expectations of the epistemic community, professional associations and representative employers within the field of the program

- by the practical nature of the professional knowledge acquired, graduates can be a link between companies and local, national, governmental and non-governmental authorities, to be specialists to reduce or eliminate the consequences of an emergency situation
- graduates can draw up internal and external emergency plans and prepare the population for environmental emergencies and work in emergency inspectorates

10. Evaluation

Type of activity	10.1 Evaluation criteria	10.2 Evaluation methods	10.3 Pondere din nota finală
10.4 Course	correctness of the given answers	Written exam	65%
	Active participation in courses	Active participation in courses	10%
10.5 Seminar	Active participation in seminars	Active participation in seminars	10%
	correctness of the project; general appearance of the project; accuracy of presentation; correctness of answers to questions;	Project (oral presentation)	15%
10.6 Minimum performance standards			
• Project presentation is compulsory: minimum grade 5 • Passing the exam: minimum grade 5 in the project and minimum grade 5 in the written exam.			

Date Signature of course coordinator Signature of seminar coordinator

06.12.2024 Alexandru OZUNU . Alexandru OZUNU

Date of approval Signature of the Head of Department