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Place: Aalborg

# Knowledge FOr Resilient soCiEty

#### STUDY VISIT AT AALBORG UNIVERSITY

University of Tuzla
Faculty of Mining, Geology and
Civil Engineering

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#### Disaster risk management and fire safety engineering

- This concerns a new study programme on our Faculty with a newly developed curriculum. Students of all five study programmes at our Faculty: *Mining, Geology, Civil engineering, Safety and Health Administration, and Borehole Mining* will be in position to attend this course.
- -Subjects included reflect the current needs concerning the risk management in our country.
- Therefore it includes natural hazards, geotechnical hazards and damaged buildings assessment, in the light of recent floods and land slides occuring in 2014, severly affecting our country, for instance damage inflicted only in Tuzla Canton was estimated at 0.5 billion euros.
- Furthermore it includes risk management in mining and thermal energy sector since in some Cantons up to 50 % of GNP comes from these sectors. One of the most severe problems subject Cantons are facing with relate to air pollution, slag and ash deposition sites, damages inflicted of structures due to mining operations, etc.
- Subject dealing with fire protection is definitely inevitable part of such a course, followed by Institutional and legislative framework that needs to be improved in our country.









#### **PRESENTATION OF SYLLABUS**

Course: Disaster Risk Management and Fire Safety Engineering								
	I SEMESTER				II SEMESTER			
Predmet	١	Α	Lab	ECTS	٦	Α	Lab	ECTS
COMMON SUBJECT 1	3	0	1	8				
(Natural risk management)	3	U	'	0				
COMMON SUBJECT 2	3	0	1	8				
(Fire safety management)	5	U	'	0				
Assessment of damaged	2	0	1	7				
buildings		_ u	'	/				
Institutional and legislative	2	0	1	7				
framework DRM&FSE		Ů	'	/				
Risk management in mining					2	0	1	5
and thermal energy sector							'	
Geotechnical hazards					2	0	1	5
Manada walla and a								
Master thesis								20
TOTAL OF OBLIGATORY SUBJECTS	10	0	4	30	4	0	2	30
TOTAL				30				30









#### **GENERAL INFORAMTION**

#### Academic title obtained upon the completion of the course

Students upon successfull completion of the course obtain the title master in the field of disaster risk management and fire safety engineering

#### Required conditions to enroll to this course

All students upon completion of undergraduation studies (first cycle of study) in duration of 4 years (with achieved 240 ECTS)

Foreign citizens have a full right to enroll at this study programme under the same conditions as BiH citizens.

#### Title and objectives of the study programme

Title of the course is "Disaster risk management and fire safety engineering", that will be organized as a second study cycle thus ensuring continuity and upgrade of knowledge and skills gained within the first cycle of their studies. General objective is to enable further profiling of students in order to focus their skills on risk management issues.









#### **GENERAL INFORMATION**

#### **Duration and ECTS**

This course within the second cycle is conducted through lectures and research work in duration of two semester, valued by 60 ECTS, 30 ECTS for each semester. Students upon completion of the study, and defense of final (master) thesis gain 300 ECTS points in total, of which 240 ECTS for the first cycle and 60 for the second. That is a required precondition to enroll to the third, doctoral cycle of studies.

Procedure to include the new diploma in the National List of Titles will be initated upon approval of the plan and programme by Tuzla University.

Procedure usually takes 6 to 12 months thus the approved diploma will be secured for the first generation of students.









#### **GAINED COMPETENCIES**

- Natural risks assessment, prevention and remediation plans (floods, earthquakes, forest fires)
- Geotechnical Risk assessment, prevention and rehabilitation (land slides, dams, )
- Risk assessment, prevention and remediation plans in mining sector
- Risk assessment and protective measures in thermal energy sector
- Fire protection
- Assessment and rehabilitation of damaged buildings
- Knowledge of related legal framework









#### FACULTY OF MINING, GEOLOGY AND CIVIL ENGINEERING

Univerzitetska 2, Tuzla www.rggf.untz.ba











#### **CABBINETS AND LABORATORIES**

Given the general lack of space for teaching at I, II and III cycles at Faculty Of Mining, Geology And Civil Engineering in Tuzla, we are not able to permanently allocate a cabinet for teaching purposes in the new DRM & FSE master program.

In addition to consulting with management of the faculty, we have decided to adapt one of the smaller existing classrooms so that it will not lose its function in the regular teaching process, while at the same time they will be able to adapt to a specific course on the new master program.

In this classroom (Figure 1) will permanently be installed LCD video top and Smart Board, and electronics and wifi infrastructure for IT. For teaching purposes in the new master program, the classroom would be easily and quickly adapted for 10-14 laptops + additional places for theoretical and IT teaching (Figure 2).

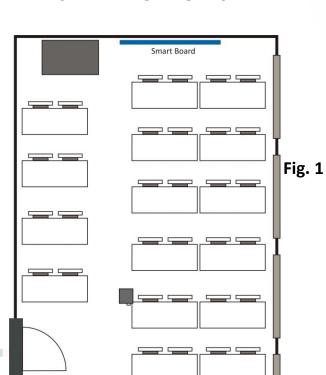
Like all classrooms, this has a controlled usage schedule and limited access. The classroom would be labeled with the ERASMUS K-FORCE sticker.





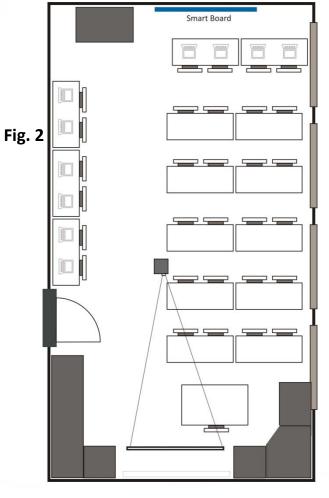


#### **CABBINETS AND LABORATORIES**





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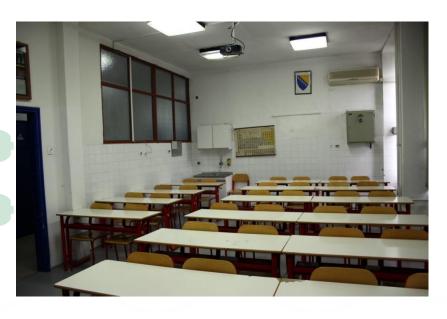




### CABBINETS AND LABORATORIES Cabinet (classroom) for teaching



- Laptops (10-14)
- LED video projector
- Smart Board
- GPS Data collector
- External LED display (optional)
- Digital camera











#### CABBINETS AND LABORATORIES Laboratory for Natural Hazards, Safety and ventilation (LAB 3)



- Miltiplin detector









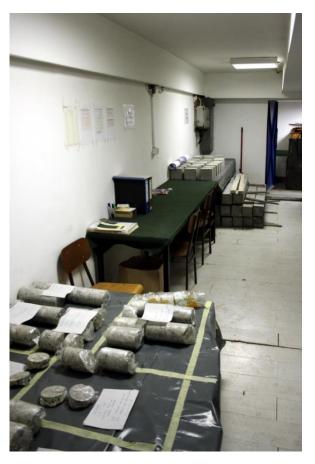
#### CABBINETS AND LABORATORIES Non-destructive testing laboratory Construction (LAB 10)



#### - INNOVATEST Concrete Armature Detector













#### CABBINETS AND LABORATORIES Geomechanical Laboratory (LAB 4)



#### - Laboratory Oven













## CABBINETS AND LABORATORIES Laboratory for Mineral Preparation Raw material and material testing (LAB 2)



- **USB Microscope PCE-MM 200UV**
- USB Microscope PCE-MM 200













#### PUBLIC PROCUREMENT EQUIPMENT STATUS

Since there are two partners in the project from B&H, according to ERASMU rules one public procurement must be conducted. The Public Procurement Act provides for such a case as regulated by the Ordinance on the implementation of the joint procurement procedure and the establishment of the central purchasing body. Given that the procurement plan modifications have been approved in Brussels, there is no obstacle from ERASMUS to initiate the public procurement procedure.

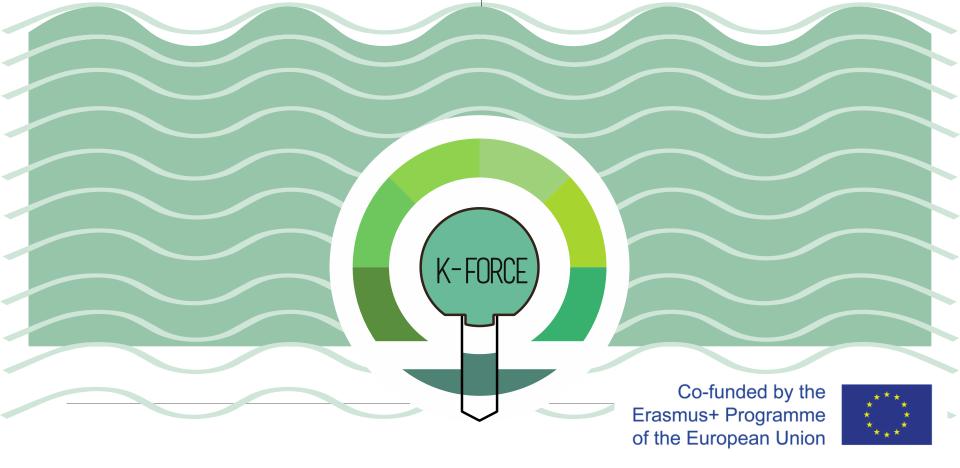
However, as the project leader has already been informed, in the case of a partner from the territory of the Federation of Bosnia and Herzegovina, there is a legal obstacle to the realization of procurement as foreseen by ERASMUS policy. As regulated by the Law on Budget of FB&H, a public institution may initiate public procurement only for the amount of funds already in the account. This also applies to the signing of a joint purchasing agreement, since the parties are also obliged to pay for their part of the equipment being purchased.

It is proposed that the amount of the project-based project to purchase the equipment should be transferred to the University of Tuzla in order to start the public procurement procedure together with the University of Banja Luka, which would be the bearer of this activity (given the somewhat simpler legislation in RS).









# Thank you for your attention

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