

Univerzitet u Sarajevu



University of Sarajevo



Study program
Natural Disasters Risk Management

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Study Programme: Natural Disasters Risk Management

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1. GENERAL INFORMATION

1.1. The Name of the Programme

Natural Disasters Risk Management

1.2. The Type of the Programme

Academic Programme

1.3. The Level of the Programme

Master's Degree - II Cycle Programme

1.4. The Aim of the Programme

Frequent occurrences of natural disasters, both in the world and in our region, are becoming one of the world's most important problems and factors in the further sustainable development of human civilization. Natural disasters have become a source of permanent threat to the social community and the environment as a whole. The damage they cause exceeds all acceptable measures. Exposure to the influence of natural disasters (droughts, fires, floods, landslides, earthquakes, epidemics, etc.) is largely increased due to the low degree of knowledge of the causes of occurrence, mechanisms of action and methods of protection. Risk management enables timely preparation of potential events that may occur, the effects and consequences that individuals and institutions may face, and the planned and systematic undertaking of measures and activities in order to minimize risks and thus avoid or reduce adverse effects. Risk management enables making better decisions, better planning and optimizing available resources, dealing with priorities, and taking appropriate measures to avoid or mitigate future problems caused by natural disasters.

1.5. The Proponent of the Programme

The programme is implemented by the University of Sarajevo. The University of Sarajevo delegates the organization of the programme to the Center for Interdisciplinary Studies and also delegates the teaching to professors and assistants from several faculties of the University of Sarajevo.

1.6. Scientific/artistic Areas the Study Programme Belongs to

The study programme "Natural Disasters Risk Management" is an interdisciplinary study programme that incorporates the scientific areas of biomedical and health sciences and therefore, the professors responsible for the courses come from the faculties of the University of Sarajevo which correspond with these areas. Along with the responsible professors, there are other instructors involved in the teaching process and they come from the University of Sarajevo or appear as guest lecturers from universities in the region and broader.

1.7. Organization and Duration of the Programme

The "+1" study program lasts one year (two semesters x 30 ECTS, total 60 ECTS).

The program consists of 5 mandatory courses, 3 elective courses, two interdisciplinary workshops, and the preparation and defense of a Master's thesis (Final Thesis). During the first and second semesters, classes are held in English and Bosnian/Serbian/Croatian. Students do a final paper of their choice, in Bosnian/Serbian/Croatian or English.

1.8. Minimum number of ECTS Credits Required to Complete the Programme

In accordance with the European Credit Transfer and Accumulation System, the programme is valued with 60 ECTS credits per year or 30 ECTS credits per semester. The number of credits for each individual course is determined in accordance with the assigned workload (theoretical and/or practical classes, seminars etc.), the time students spend doing individual assignments (homework, projects, seminar papers etc.) and the time required for exam preparation (tests, final exam).

The final thesis is valued with 20 ECTS credits. The program is organized in Distance learning mode.

1.9. Language of Instruction

Classes are held in Bosnian/Croatian/Serbian and/or English.

1.10. Selection Process for the Enrollment

Student status is acquired by enrolling in a study program implemented by the Center for Interdisciplinary Studies of the University of Sarajevo. Enrollment is done on the basis of a public call published by the University, which is decided by the Senate of the University.

Enrollment in the first study year is carried out in accordance with the Law, the Statute, these rules and based on the final results of the public competition.

The University of Sarajevo publishes the call for the enrollment of students in the first year of study in at least three daily newspapers in the territory of Bosnia and Herzegovina. The call for the enrollment of students in the first year of study is published on the website and notice board of the University of Sarajevo and the Center for Interdisciplinary Studies with the prior approval of the Ministry.

The right to enroll in an interdisciplinary master's study (II cycle) is available to candidates:

- citizens of Bosnia and Herzegovina and foreign citizens who have completed the corresponding first cycle of studies in Bosnia and Herzegovina, which is evaluated with at least 240 ECTS study points, which in total with the evaluation of the second cycle amounts to at least 300 ECTS,
- who completed their studies according to pre-Bologna curricula in Bosnia and Herzegovina,
- who have completed an integrated study lasting five and/or six years, as well as
- candidates who completed the first cycle, i.e. pre-Bologna studies, outside of Bosnia and Herzegovina, and for whom, after the recognition or equivalence procedure, it was determined that they have completed adequate education to continue their education.

The unique ranking list of all registered candidates will be based on the completed study of the II cycle, four-year study according to the pre-Bologna study system, integrated study, and the average grade achieved by the candidates during their studies.

1.11. Qualifications upon Completion of the Programme

After passing all the exams listed in the Curricula and defending the Final Thesis; after acquiring the full, required number of ECTS credits, and after finishing the studies, the student gets the academic title of Master of Natural Disasters Risk Management.

1.12. The Analysis of Employment Possibilities after Graduation

Based on the acquired knowledge, skills and abilities, students will be able to get a job in state, entity and cantonal institutions that deal with monitoring, prevention and protection from natural disasters such as: Hydrometer Institute, Water Agency, then public administration bodies (municipal, cantonal, entity level), namely in Civil Protection departments and Sectors for planning protection and rescue measures in case of natural disasters, Institutes for city planning and construction, as well as educational institutions, research institutes and similar.

In addition to the above, students will also be trained to teach lifelong learning programs in the field of protection against natural disasters.

1.13. The Programme's Vertical Mobility

According to Article 1, paragraph (3) of the Study Rules for the I, II cycle of studies, integrated, professional and specialist studies at the University of Sarajevo, the second cycle leads to the degree of Master or equivalent after the completion of the first cycle of studies; it lasts one or two study years, and is evaluated with 60 or 120 ECTS points so that in total with the first study cycle, it carries 300 ECTS points, which ensures vertical mobility for enrollment in the third study cycle.

1.14. Grading Scale

Each individual course syllabus contains the grading scale, in accordance with the goals and outcomes of the course.

1.15. Quality Assurance

The study programme's quality and success will be assessed through internal and external observation and assessment by an official committee and the students.

2. PROGRAMME DESCRIPTION

2.1. Learning Outcomes at the Study Programme Level

The programme Natural Disasters Risk Management is interdisciplinary in nature, with the goal of acquisition of specific knowledge, skills and competences in solving the problem of protection and preventive action in the event of natural disasters, namely:

KNOWLEDGE

- Factual knowledge about the causes, types and consequences of natural disasters
- Theoretical knowledge of the principles and strategies of protection against natural disasters
- Understanding the mechanisms of natural disasters and risk assessment
- Knowledge of the latest research, technologies and approaches in protection against natural disasters

SKILLS

- Cognitive skills for problem analysis and decision-making in the event of natural disasters
- Psychomotor skills for applying acquired knowledge in practice, including crisis management
- Social skills for teamwork, cooperation, communication and leading teams in case of natural disasters

COMPETENCES

- Independence in solving problems and making decisions in case of natural disasters
- Responsibility for the protection of people, the environment, tangible and intangible assets
- Ability to think critically, analyze and synthesize information, draw conclusions and make recommendations for action in the event of natural disasters
- Developing creative solutions for prevention and protection from natural disasters.

2.2. The List of Obligatory and Elective Courses

The table 1 contains the list of courses with ECTS credits and number of hours.

NO	Status	Course name	Hours	ECTS	Assigned professor/s
First Semester					
1	O	Natural Disasters Risk Management	30	5	Teachers and associates selected for the field to which the subject belongs
2	O	System of protection and rescue in natural disasters	30	5	Same
3	O	Application of topographical foundations in disaster management and protection	30	5	Same

4	O	Security aspects of natural disasters	30	5	Same
5	I	Elective course 1	30	5	Same
6	I	Elective course 2	30	5	Same
I semester:				30 ECTS	
Second Semester					
1	O	Management of geoinformation in protection against natural disasters	30	5	Same
2	I	Elective course 3	30	5	Same
3	O	Workshop	10	/	Same
4	O	Workshop	10	/	Same
5		Final thesis		20	Same
II semester:				30 ECTS	
Overall				60 ECTS	
ELECTIVE COURSES	1	Biological and radiation safety	30	5	Same
	2	Water - environmental problems in case of natural disasters	30	5	Same
	3	Water protection and sustainable development	30	5	Same
	4	Management of public health threats - epidemics/pandemics	30	5	Same
	5	Spatial planning in the function of disaster risk reduction	30	5	Same
	6	Earthquake risk and effect on buildings	30	5	Same
	7	Durability of materials as a measure of prevention	30	5	Same
	8	Geoinformation and communication technologies for natural disaster risk management	30	5	Same
	9	Assessment of the risk of traffic infrastructure from natural disasters	30	5	Same

WORKS	1	Creation of a platform for joint action in case of natural disasters			

2	Preparedness and response in natural disasters - risk reduction			
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2.3. Information about the Programme's Structure and the Requirements for Enrolment in the Next Semester

In the application of the European Credit Transfer System (ECTS) in the master's study proposal "One Health", the starting point is the agreement, accepted throughout the European area of higher education, that the work required to master one academic year of study amounts to 60 ECTS points. The student gets 40 ECTS points from the organized classes, and 20 ECTS points from the work on the final paper.

The program consists of 5 mandatory courses, 3 elective courses, 2 interdisciplinary workshops and the creation and defense of a Master's thesis (final thesis). During the first and second semesters, classes are held in English and BHS. Students do a final paper of their choice, in BHS or English.

Program structure:

First semester:	<ul style="list-style-type: none"> - 4 obligatory courses - 2 elective courses <p>= overall 30 ECTS</p>
Second semester:	<ul style="list-style-type: none"> - 1 obligatory course - 1 elective courses - 2 interdisciplinary workshops - preparation and defense of the final thesis <p>= ukupno 30 ECTS</p>

2.4. The List of Elective Courses Offered at Other Study Programmes and the Requirements for their Selection

A student can choose a course - compulsory or elective (the curriculum provides mandatory courses with 6 ECTS and 30 hours each, and elective courses with 3 ECTS and 30 hours each) from another study program if the goals and outcomes of that subject are in accordance with the aim and outcomes of this study program, by submitting an application to the Council of the Center with accompanying documentation, i.e. the syllabus of the course they wish to choose/listen to.

2.5. Completion of the Programme

The student will complete the studies by passing all the exams and writing the final thesis. The student chooses their thesis supervisor based on their interest and the instructor's research area. The thesis topic must be closely connected with the area of nutrition. The possible topics for final theses are suggested by the professors. However, the student can suggest their own thesis title to the professor they wish to work with.

The thesis supervisor can also be an instructor who has not been teaching at the specialist study, but the thesis topic is related to the programme's field. The suggested professor needs to possess adequate skills and

competencies in order to be a thesis supervisor. The choice of the thesis supervisor is approved by the Academic Council of the Center for Interdisciplinary Studies.

The students submit their thesis applications on the prescribed form. After the application's approval by the Council, the Council forms the Thesis Defence Committee. The members of the Committee must be professors ranging from the assistant professor to full professor. The Committee consists of the president and two members, or their substitutes. One of the members of the Committee is the thesis supervisor.

The student may change the topic of their thesis once, at the latest 30 days after the approval of their first topic. The students defend their theses with the public presentation.

All the other issues pertaining to the organization of the classes and the study programme – the students' rights and obligations, application process and the enrolment – shall be regulated by the Law, the Statutes, the Rules for the First and the Second Cycle, the Integrated Study Programmes, Professional and Specialist Study Programmes at the University of Sarajevo.