

AGREEMENT OF COOPERATION

BETWEEN

The University of Molise, having seat in Via F. De Sanctis, s/n - 86100 Campobasso, Italy, represented by the Rector, prof. Giovanni CANNATA,

AND

The University of Sarajevo, having seat in Obala Kulina Bana 7/2, 71000 Sarajevo, Bosnia-Herzegovina, represented by the Rector, prof. Boris TIHI,

In consideration of the reciprocal interest in establishing and setting up a co-operative international relationship in the carrying out of their respective responsibilities, have agreed the following:

I. - OBJECTIVES

This agreement aims to develop joint study programmes, exchange and co-operative programs in the field of teaching, promoting student educational exchanges and research, according to the following terms as indicated.

This agreement will take place in accordance with cultural and scientific exchanges as foreseen by the two countries and both parties involved will not oppose any type of co-operation with other universities, even if these universities are of another nationality.

II. - TYPES OF CO-OPERATION:

The co-operation between the two universities will regard the following:

1. Exchange of information and publications, including the exchange between the libraries of the respective institutions.
2. Exchange of teaching and research staff, regarding the activated courses of study in the respective academies.
3. The organisation of seminars, meetings and symposium.
4. Joint research studies.
5. Joint programmes of study.
6. Access to equipment and specific didactic material.
7. Short exchange visits.
8. Pre and post-degree exchange programmes.
9. Other agreed upon collaborating activities.

III. - AREAS OF CO-OPERATION:

The co-operation will take place in the scientific areas present in both universities.

The staff assigned to this form of co-operation from both universities for the above mentioned activities must be accepted by both parts according to professional qualifications and the requested task.

The areas involved in this agreement will include different programmes and activities that will be specifically defined in detailed agreements or corresponding protocol.



IV. - PROGRAMMES-SPECIFIC PROJECTS:

A detailed agreement or respective protocol for each programme or specific project must be developed

These must include the following data:

1. The origin, nature and description of the programme or project.
2. The names of the people responsible for the project and the participants of each university.
3. The duration of the programme-project.
4. The financial resources necessary to cover the costs relative to the project and the distribution of the sum in question.
5. Planning for the accommodation and the participation of the guests in university activities, etc.

Each University Rector must approve these detailed agreements.

V. - FINANCIAL AGREEMENTS

- a) With the following agreement, the institutions involved do not assume any financial responsibility.
- b) In a successive meeting all the specific financial details regarding each programme or project will be settled.
- c) These collaborating activities, with the exception of differing specific agreements, will be subject to the existing financial resources open to international accords.

VI. - RECOGNITION AND VALIDATION OF THE COURSE OF STUDY:

In the case of joint study or student exchange programmes, following the protocol of student exchange programmes, an academic system of mutual recognition and validation will be established. This system must be described in each detailed agreement or specific protocol and must be approved by the respective academic authorities from both Universities.

VII. - PROTECTION OF INTELLECTUAL DISCOVERIES AND RESEARCH:

Any data gathered by joint research activities, obtained under this agreement will remain at the disposal of both parties, unless otherwise agreed upon.

Possible patents arising from future developments will be subject to patent norms and laws regulating the relationship between the inventor and his University. The predefined agreement regarding patent use must have the permission of all the inventors involved.



VIII. - PRIVILEGED INFORMATION

Whatever privileged information should arise from this accord or from its realisation must be protected according to the laws of the parties involved.

IX. - LENGTH AND TERMS OF THE AGREEMENT

- a) This agreement will be in vigour for three years starting with its formal signing, in accordance with the statutory dispositions of each party and shall be automatically renewed, unless one of the two parties asks for its revocation.

- b) The agreement will be revoked upon request by one of the two interested parties. Such a request must be in writing and given with at least six months of advance notice to the other partner who cannot make any type of demands.
- c) The request for revocation will not have any influence upon ongoing activities unless otherwise specified by one of the two parties.

X. - CO-ORDINATION:

Upon the signing of this agreement and not beyond a three month period, each Rector will nominate a co-ordinating commission or commissioner who will organise and supervise the activities to be carried out in this agreement.

XI. - JURISDICTION:

Whatever controversy may arise relative to the observation, interpretation, and the execution of the clauses in this Agreement remain subject to the Principles of Private International Law in vigour in the legislation of the parties involved.

The signatures of the partners involved shall be placed upon two conforming copies, in Italian and English language, of this Agreement.

Signed in _____,

University of Molise
Professor Giovanni Cannata -The Rector



University of Sarajevo
Prof. Boris TIHI – The Rector



EXECUTIVE AGREEMENT

BETWEEN

the University of Molise, having seat in Via F. De Sanctis, s/n – 86100 Campobasso, Italy, represented by the Rector, prof. Giovanni CANNATA,

AND

The University of Sarajevo, having seat in Obala Kulina Bana 7/2, 71000 Sarajevo, Bosnia-Herzegovina, represented by the Rector, prof. Boris TIHL,

the following is agreed and concerted:

Article 1

The contracting Universities will co-operate in the fulfilment, during the period indicated in Article two, of the didactic plan related to the first level course degree in Science and Technology for the Environment and Territory, as specified in Annex A, which is part of this Executive Agreement.

Article 2

The requirements specified in Annex A will be carried out within three years.

Article 3

The teachers used for the development of the didactic and scientific activities, the duration and objectives of the scientific and teaching activities, the duration of courses, definition of the programme, will be decided by the coordinator of the course degree who will also provide to select the teaching staff of the University of Molise and, in accordance with the counterpart's coordinator, the teaching staff of the partner Institution.

Article 4

The definition of the financial implications, realized edited by the University of Molise, is specified in Annex B, part of this Executive Agreement.

Article 5

Both the Parties will draw up an insurance policy, or will operate their own internal policy, in order to guarantee medical assistance to teachers and students involved in the mobility plan for didactic matters, in case of accident or illness, with the exception of chronic illness and prosthesis.

In the case of the management of complex technical and scientific equipments, which could involve risks for teachers and students, the Parties will obtain an appropriate insurance.



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Article 6

Travel and subsistence costs to realize teachers and students' mobility, will be charged to the University of Molise; this latter will help teachers and students to find accommodation and will facilitate their admittance to refectories.

The above mentioned rule only will work for the first three years of activity; to the term of the three years, the Parties will provide to the renewal in establishing new rules compatible with the financial resources at their disposal.

Article 7

The Parties agree to deliver the combined title of first level (laurea), to recognize the university credits acquired in following the lectures, and to require to the competent Governative bodies, during the course, to recognize the legal value of the title.

Article 8

The Parties agree to respect the laws on the protection of the privacy, in allowing only to the enrolled students to follow the courses which will be activated, to monitor because only the enrolled students could use the didactic material which will be at their disposal through a personal password, and to avoid that the same didactic material could be used by other customers.

Article 9

The Parties agree to put to disposition, in the limit of their own financial and staff resources, all is needed (rooms, computer science equipments, laboratories, libraries, etc.) for the regular development of the didactic activities.

Undersigned in _____ on _____

University of Molise
Prof. Giovanni CANNATA – Rector



University of Sarajevo
Prof. Boris TIHI - Rector



ANNEX A – DIDACTIC PLAN

First level course degree in Science and Technology of the Environment and Territory

1. Aims

- To provide an overall understanding of the environment. Students will also acquire expertise in the analysis of the processes, systems and related problems concerning the environment.
- To prepare students to enter careers involving: i) sampling, classification, analysis, restoring and preserving the abiotic and biotic components of natural terrestrial and aquatic ecosystems; ii) nature reserves, parks, science museums and teaching centres; iii) the analysis and monitoring of man-managed environmental systems with the aim of improving the quality of the environment; iv) the localization, diagnosis, restoration and safeguard of environmental and cultural heritage.
- Students will become fluent, as regards the course topics, in at least one European Union language in addition to their own. They will also gain competence in scientific communication.
- To prepare individuals able to work independently and in a group, so as to be professionally competitive.

2. First level course degree in Science and Technology of the Environment and Territory

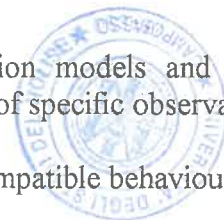
2.1 Aims and Professional Profile

Students will receive basic training in all aspects related to the environment and its interactions with the community. They will be able to identify and develop the interactions between anthropic and non anthropic systems, and to analyse and manage ecological processes, environmental systems, natural resources, and to apply field methodologies.

Therefore, graduates will possess a broad basic environmental culture, and to be able to interact with experts in various disciplines. Their training will be devoted to sampling, analysis and monitoring natural, semi-natural and anthropic ecosystems and to the organization and interpretation of data, with particular reference to the ecological disciplines. They will also possess the technical, scientific and professional expertise necessary for the management and interpretation of territorial information.

The graduate in Environmental Sciences will be able to:

- Participate in investigations of the physical and biological systems.
- Evaluate, also using mathematical-statistical methods, simulation models and advanced computer technology, projects related to the environment and the results of specific observations.
- Prepare reports aimed at the general public and to promote ecocompatible behaviour.
- Contribute to the management of environmental policies originating from the public and private sectors.



- Provide environmental services and work on the relative informative and monitoring systems, and advise on policies of environmental control and their evaluation.
- Contribute to the evaluation of anthropic impacts on natural ecosystems.

Graduates in Environmental Sciences will therefore be expert in the evaluation and management of environmental systems and land management. They will also receive training in the basic disciplines of the course (mathematics, physics and chemistry) and their links with the disciplines of agricultural, economic, legislation. They will also study those aspects of the natural disciplines essential for the development of a holistic view of the environment.

2.2 Professional opportunities

Graduates will be able to pursue a career in the public or private sectors both at local, national and international level. The program is designed to prepare individuals for careers in business, industry or government; or to pursue graduate studies in environmentally-related sciences, law, public health or business. The curriculum provides a wide scope of instructions which enables students to explore various disciplines and professions involved with environmental issues.

They will be qualified for a career in the Ministries of the Environment, Health, Merchant Navy, Agricultural Policy, Civil Protection, Public Works, University and Scientific and Technological research and such bodies as the Istituto Superiore di Sanità and Experimental Stations, and the Mountain Communities (e.g. management of natural reserves and parks, preparation of laws governing parks, hunting and fishing, antipollution, and waste-disposal etc.). The degree in Environmental Sciences will open career opportunities in private companies and consortia that collect and elaborate data on the environment, and that are involved in projects of restoration, forecasting the effects of interventions on the environment, evaluating environmental impact, natural resources evaluation, and monitoring environmental parameters.

Given their expertise in the collection and elaboration of biotic and abiotic experimental data, their knowledge of ecological processes, economics and legislation, graduates in Environmental Sciences are in demand during the planning and in the legislative and management stages of all matters related to the environment.

3. Structure of the Course

3.1 Duration and contents

This three-year course consists of 25 courses for a total of 180 credits. It consists of lessons (using multimedial technology), theoretical and practical exercises, seminars, monographic courses, guided activities, technical visits (during internships in Italy), partial evaluation tests, and correction of essays. Courses are devoted to a single discipline or, in the case of modules, several disciplines (integrated course). At least three credits are awarded for each single-discipline course. The integrated course consists of coordinated didactic modules for a maximum of nine credits also awarded by more than one teacher and with a single final examination.

Students may shape their own programme depending on their aims. The course is structured in 'basic training' (46 credits) and 'profession-orientated training' (58 credits). Integrative disciplines (42 credits), activities chosen by the students (credits), and other activity (9 credits) complete the course. The total of the credits including the final examination (16 credits) amount to 180, which corresponds to the Level I degree.



The academic year is divided into two six-months periods, each lasting at least twelve weeks. The three-year course includes:

- Elements of Mathematics, Statistics, Computer Science and Physics applied to the organization, management and elaboration of analytical data.
- Elements of Microbiology, Biochemistry and Applied Biology, Chemistry, Soil Science, Lithology and Geology that will enable the student to interpret complex abiotic and biotic phenomena.
- Elements of Ecology, Environmental Botany, Impact Evaluation, Nature Conservation and Landscape Ecology that will enable the student to address problems related to the valuation and management of environmental systems.

3.2 Application

Enrollment in the course is regulated by laws governing university enrolment. The number of enrolments per course is established by the Academic Senate, upon the proposal of the Faculty Council, depending on the structures available, professional opportunities and according to the general criteria established by the Ministry of University and Scientific and Technological Research.

3.3 Degree examination

The degree examination, which is governed by the rules established by the Universities, must consist in a discussion of the activity carried out within the framework of the internship and/or through a thesis on a topic agreed with the tutors. Students must have passed the examinations required in their given disciplinary area in order to sit the final examination.



General information regarding the content of some Courses

Biochemistry: biochemistry is the study of living organisms from the molecular point of view. Main contents of the course: structure and function of proteins; enzymes (and inhibition of enzyme activity by environmental toxics); metabolic pathways and regulation; bioenergetics; the effects of toxics on metabolic pathways; metabolic pathways of xenobiotics in mammals.

Applied Biology: the course deals with main axes of cellular functioning; DNA replication and transcription; gene expression; genetic code and protein synthesis; cellular cycle; mitosis and apoptosis; meiosis and genetic variability; environmental mutagenic pressure and genetic load; cellular differentiation.

Physical geography and geomorphology: atmosphere and meteorological parameters; climate; astronomic parameters; global change; principles of geomorphology; exogenic and endogenic processes; landform features and depositional environments.

Cartographic analysis and geographical information system: principles of topographic mapping; analysis and interpretation of topographic sheets; land use mapping; thematic mapping and map overline; introduction to GIS (geographic information system) and applications.

Zoology: study of the variety of animal life on earth; morphogenesis considering structure and function, systematics and phylogenesis and their environmental relationships.

Ecology: deals with organisms and environmental relationship considering distribution, evolution, responses to physical environment and inter and intraspecific relationships. Major ecology knowledge regards population and community dynamics, biotic and abiotic interactions. Energy ecosystem fluxes and biogeochemical cycles will be examined.

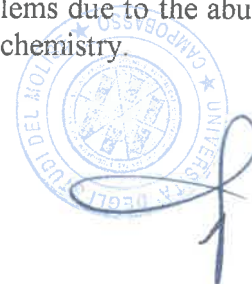
Environmental botany: the course deals with plant taxonomic diversity using a botanical phyto-geographical and plant ecology approach. Major knowledge regards phylogenesis and morphological organisation of natural and antropogenic plants, plant and vegetation diversity, classification and dynamics in the field of natural resources management.

Landscape ecology: the course deals with landscape patches at different scale. Basic knowledge contains two major contents: landscape definition and landscape structure (fragmentation, connectivity, diversity, etc.) including disturbance and implication for conservation.

Morphology and plant physiology: the course deals with the most important aspects of plant morphology and physiology. Root, shoot, branch, leaf anatomy will be described by analysing both primary and secondary tissues. Other themes include: photosynthesis, transpiration, the ascent of sap, water transport and hormones. Both morphological and physiological aspects will be described focusing upon the influence of environmental factors, particularly vegetation and soil erosion.

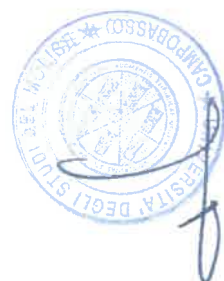
Inorganic and general chemistry: the course will include basic chemical cobcepts such as: elements, atoms and isotopes, ionic and covalent bounds. Basic knowledge of chemical equilibrium and the low of mass action as applied to acid-base solubility and redox equilibrium.

Environmental chemistry: the course will include the study of chemical problems due to the abuse of environment. It will also include an understanding of atmospheric and water chemistry.



General microbiology: Structure and morphology of microorganisms. Microbial growth. Taxonomy and microbial evolution. Microbial genetics: transformation, transduction and conjunction.

Organic chemistry: an introduction of the study of nomenclature, structure, synthesis, reactions, identification and mechanism of aliphatic and aromatic organic compounds.



First level course degree in Science and Technology of the Environment and Territory

Courses	Lectures (credits)	Laboratory (credits)
I year – I semester		
Mathematics	7	
Zoology	7	1
Inorganic and general chemistry	7	1
Morphology and plant physiology	7	1
I year – II semester		
Physics	7	
Physical geography and geomorphology	6	1
Foreign language	6	1
Informatics	6	2
II year – I semester		
Organic chemistry	7	1
Statistics	7	
Applied biology	4	
Biochemistry	4	
Applied geology	6	1
II year – II semester		
Soil sciences	6	1
European legislation	8	
Environmental botany	7	
Ecology	7	1
III year – I semester		
Cartographic analyses and geographical information system	5	1
Environmental economics	4	
Environmental chemistry	5	
General and environmental microbiology	5	2
Optional courses	9	
III year – II semester		
Engineering geology and hydrogeology	6	1
Conservation of nature resources	4	
Landscape ecology	4	
Evaluation of environmental impact	3	
Practical activities	9	
Final evaluation	2	

