

PROGRAMME PROFILE

Educational Programme	Environmental Sciences
Degree Awarded	Bachelor
Standard Length of Studies (Number of ECTS Credits)	3 years - 6 semesters -180 ECTS
Type of Study	Full-time
Higher Education Institution	Babes-Bolyai University Cluj-Napoca, Romania
Faculty / Department	Faculty of Environmental Sciences
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Profile of the Degree Programme	Bachelor in Environmental Sciences
Target Group / Addressees	Students interested in developing skills for a career in Environmental issues (e.g. environmental management, environmental protection, biodiversity, agriculture, waste management, natural resources management, natural and anthropic hazard and risk management, etc.).
Entrance Conditions	High school diploma (Baccalaureate) <ul style="list-style-type: none"> • 50% general grade average in high school • 50% baccalaureate examination score
Further Education Possibilities	Master Studies
Description of Study	<p>Since 2007, the year of Romania's EU integration, the need for environmental specialists has greatly increased in order to meet European requirements in this area and to help solve serious environmental problems facing our country.</p> <p>The proposed purposes of the specialization of the Faculty of Environmental Sciences is to train professionals in environmental science. It is necessary to train these specialists in a short time, due to the fact that there is a huge shortage in the labor market caused by the rate of socio-economic development, the change in production technologies that increase the risk and vulnerability on the environmental factors from Romania.</p> <p>Furthermore, these rapid changes in society and in social life happen because of the abnormalities in the national economy and technological development.</p> <p>There is a great need for effective education and research in this area.</p> <p>Otherwise, one can end up heaving appropriate legislation in the field, but no one to apply it appropriately at the level of all stakeholders (government, local - environmental agencies, civil protection inspectorates, municipalities, businesses, NGOs, etc.). It is obvious that these experts will find a job and labor market demand will be high at least for the next 10 years.</p>

	<p>Moreover, the curricula and syllabi related to this line of specialized training provide both theoretical and especially practical environmental science knowledge.</p> <p>This study profile is based on current knowledge of environmental issues, the need for its integrative management and acute requirement of development and implementation of territorial and environmental planning.</p> <p>As specialization in today universities, Environmental Science has precise objectives and missions in this field. It surveys the surrounding reality in all its moods and develops and offers solutions to critical situations, creating "a work field" for environmental engineers.</p> <p>The specialization <i>Environmental Sciences</i> at the Faculty of Environmental Science, Cluj-Napoca focuses on scientific research and the applicability of the research results.</p>
Purposes of the Programme	<p><i>Main objective</i></p> <p>Training of environmental specialists</p> <p><i>General objectives:</i></p> <ul style="list-style-type: none"> • Creating a dynamic and attractive specializations within the European educational system • The curriculum gives a comprehensive picture of environmental issues viewed as a whole and also as different components. Its purpose is to provide graduates the skills necessary for conducting research work, in identifying practical solutions to practical environmental problems. Students build up their skills to practical and conceptual analysis of water systems, land and atmosphere and their interactions with the biosphere and antroposfere. The curriculum also include subjects from social and economic sciences. It pays particular attention to developing computer skills. • Creating an infrastructure and equipment for teaching and research performance, which enables a high quality teaching and scientific research at competitive standards • Promoting national and international scientific cooperation in order to achieve competitive research network in environmental study • Promoting students, teachers and researchers mobility, in the European Higher Education Area, as well as other prestigious academic institutions in the world • Promoting the European dimension in higher education, with regard to curricular development, inter-institutional cooperation, mobility schemes and integrated programs of study and research.

	<p><i>Specific objectives:</i></p> <ul style="list-style-type: none"> • Integrated Knowledge of the Environment (composition, structure, dynamics, function, etc.); • Analytical knowledge of the physical components of the environment (substrate, atmosphere, hydrosphere, soil, relief) and biotic components, including the man and his activity.; • Knowledge of environment types, in order to participate in the environmental planning (e.g. Physical environment, urban environment, rural environment, temperate environment, tropical environment, mountain environment, etc. • Learning research, assessment and environmental management methodology, for various purposes (impact studies, environmental audit, risk studies, spatial rehabilitation studies, etc.); • Technical skills training - tools for research, and environmental design (eg laboratory techniques, investigative "in situ" techniques, computer techniques, data processing and analysis, geographical Information Systems- GIS, etc.) • Building capacity and skills to make projects and environmental studies for various departments of human activity in the environment.
<p>Specialization / Area of Expertise</p>	<p>The study programme aims to form specialists in the field of environmental sciences, which after graduation will be interdisciplinary trained:</p> <ul style="list-style-type: none"> • Having advanced knowledge in natural sciences, ecology, technical disciplines, economics and environmental management; • Identifying and evaluating events with a high potential risk and impact on the environment in different fields; • Coordinating activities to prevent environmental pollution, reduction of harmful environmental effects and eliminating the cause of pollution • Having knowledge in rational use of natural resources; • Technology that produces less waste; • Developing technology solutions for reuse and disposal of hazardous waste; • obtaining general knowledge of environment and landscape protection policies; • Planning, organizing and controlling creative environment related projects.

Extra Peculiarities	-
Practical Training	<p>4 weeks (40 hours / week) of practical training distributed during the first year of study (two weeks) and the second year of study (two weeks):</p> <ul style="list-style-type: none"> • During the the first and second years of study, second semester (April-May), an itinerant field application of one week on a previously set theme of analysis and environmental assessment. • During the first and second years of study, one week internship at targets of interest in the subjects studied during that year.
Final Examinations	Research thesis
Gained Abilities and Skills	<ul style="list-style-type: none"> • Computing skills in environmental assessment and modelling • The competence of providing sustainable instruments during the environmental decision-making process • Verbal and written communication skills for specific purposes in at least one international circulation language • The capacity of individual and/or interdisciplinary team working practice in resolving complex environmental issues • Competences in applying methods and techniques of environmental analysis, assessment and planning • The ability to identify the proper solutions and measures for real environmental instances • The competence of elaborating environmental studies in conformity with the actual legislation • The capacity to interpret and operate with information, data and indices from varied technical or scientifically fields of expertise • Capacity to managing related activities in the study subject, being able to carry out analysis and provide expertise on issues related to environmental management in general, related to environmental impact of anthropic activities, natural processes that influence human society, etc.
Job Placement, Potential Field of Professional Activity	<p>Graduates, specialist in Environmental sciences, will be able to operate on a wide range of designated position such as:</p> <ul style="list-style-type: none"> • Specialist within the local, national, European level public institutions or in different international institutions that deal with environmental issues • On the terms of graduating the pedagogical module, the bearer of the diploma is allowed to practise within the educational field -Teacher/Professor in subjects related to environmental sciences (geography, biology)

	<ul style="list-style-type: none">• Consultant or experts within NGOs, multinational companies, national and European institutions, within different services and compartments, especially those that incorporate environmental issues (protection of the environment, environmental management, industry, transport, agriculture or any other economical branches)
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Date: 12 .10. 2010

Signature,
Lector dr. Nicoleta BRISAN

