

Annex 6

SUBJECT OUTLINE

1. Information on the study programme

1.1 Academic institution	UNIVERSITY OF ORADEA
1.2 Faculty	FACULTY OF ENVIRONMENTAL PROTECTION
1.3 Department	ENVIRONMENTAL ENGINEERING
1.4 Field of study	ENVIRONMENTAL ENGINEERING
1.5 Cycle of study	UNDERGRADUATE STUDIES
1.6 Study programme/Qualification	BIOTECHNICAL AND ECOLOGICAL SYSTEMS ENGINEERING

2. Information on the discipline

2.1 Name of discipline	BIOGEOGRAPHY AND BIODIVERSITY CONSERVATION						
2.2 Course holder	Lecturer PhD. eng. AGUD ELIZA						
2.3 Seminar/Laboratory/Project holder	Lecturer PhD. eng. AGUD ELIZA						
2.4 Year of study	II	2.5 Semester	III	2.6 Type of evaluation	Summative	2.7 Regime of discipline	I

(C) Compulsory; (O) Optional; (E) Elective

3. Total estimate time (hours per semester of didactic activities)

3.1 Number of hours per week	3	out of which: 3.2 course	2	out of which 3.3 seminar/laboratory/project	1	
3.4 Total hours in the curriculum	42	out of which: 3.5 course	28	out of which 3.6 seminar/laboratory/project	14	
Time allotment						
Study assisted by manual, course support, bibliography and notes						10
Additional documentation in the library/ on specialised electronic platforms and in the field						10
Preparation of seminars/laboratories/ topics/reports, portfolios and essays						10
Tutorship						10
Examinations						10
Other activities.....						8
3.7 Total hours of individual study	58					
3.9 Total hours per semester	100					
3.10 Number of credits	4					

4. Pre-requisites (where appropriate)

4.1 curriculum	
4.2 competences	

5. Conditions (where appropriate)

5.1. related to course	Video projector, computer
5.2. related to seminar/laboratory/ project	Equipment related to the development of laboratory hours (computer, etc.), the performance of all laboratory work and field trips.

6. Specific competences acquired	
Professional competences	<p>C2. Managing and solving specific environmental problems for sustainable development.</p> <p>C2.1 Description and application of concepts / theories and practical / technological / engineering methods for determining the state of environmental quality</p> <p>C2.4 Qualitative and quantitative evaluation of natural phenomena and anthropogenic activities on the quality of environmental factors</p>
Transversal competences	<p>CT3. Efficient use of information sources and of assisted communication and professional training resources (portals, Internet, specialized software applications, databases, online courses, etc.) both in Romanian and in an international language.</p>

7. Objectives of discipline (coming from the specific competences acquired)

7.1 General objective	Awareness of the tourist potential of floristic and faunal elements, cultivating respect for nature, for the values it holds and awareness of the need to protect and conserve natural capital in general and floristic and faunal diversity, in particular
7.2 Specific objectives	<ul style="list-style-type: none"> - the use of research techniques and methods that allow a qualitative and quantitative evaluation of the main biogeographical phenomena; - learning the skills of: cartographic representation of biogeographic areas; evaluation of the architectural model of the vegetal formations; determination of the duration of the vegetation season and its phenophases; construction of biogeographic profiles, meant to capture the causal relationship relief - soil - vegetation; elaboration of studies destined to evaluate the tourist potential of the biogeographical elements from different relief units or hydrographic basins; mastering strategies for tourism capitalization of biological resources.

8. Contents*/

8.1 Course	Methods of teaching	No. of hours/Remarks
1. Purpose of biogeography, organization and importance of the biosphere 1.1. The object of biogeography 1.2. Biosphere organization 1.3. The importance of the biosphere 1.4. Causes determining the differentiated spread of beings	Lecture, debate	Attendance at the course is optional, but recommended
2. Paleogeographic evolution 2.1. The appearance and diversification of life on earth 2.2. The evolution of life in the Mesozoic 2.3. The Neozoic.	Lecture, debate	Attendance at the course is optional, but recommended
3. Biogeographic regioning of land	Lecture, debate	Attendance at the course is optional, but recommended
4. Global distribution of plant and animal communities	Lecture, debate	Attendance at the course is optional, but recommended
5. Vegetation and fauna of Romania 5.1. The biogeographic specificity of Romania. 5.2. Biogeographical areas and levels	Lecture, debate	Attendance at the course is optional, but recommended
6. Protected natural areas and areas in Romania 6.1. Categories of protected natural areas 6.2. National parks. 6.3. Natural parks 6.4. Geoparks. 6.5. Natural reservations	Lecture, debate	Attendance at the course is optional, but recommended
7. Design of protected area networks 7.1. Problems in the design of protected areas 7.2. Networks of protected areas 7.3. Ecology of landscapes and design of protected areas 7.4. Setting up an ecological network	Lecture, debate	Attendance at the course is optional, but recommended
8. Assessment of natura 2000 sites from the point of view of habitats of community interest and of species that need conservation measures	Lecture, debate	Attendance at the course is optional, but recommended
Bibliography 1. Bănărescu, P., Boşcaiu, N., 1973. Biogeografie. Perspectivă genetică și istorică. Ed. științifică, București. 2. Cogălniceanu, D., 2003, Biodiversity, Verlag Kessel, Remagen. 3. Cox, B. C., Moore, P. D., 2005. Biogeography. An ecological and evolutionary approach. Seventh edition. Blackwell Publ. 4. Hugget, R. J., 2004. Fundamentals of biogeography. Second edition. Routledge Taylor & Francis group. 5. Lomolino, M. V., Riddle, B. R., Whittaker, R. J., Brown, J. H., 2010. Biogeography. Fourth edition. Sinauer. Associates, Inc.. 6. Mohan, G., Ardeleanu, A., Georgescu, M., 1993, Rezervații și monumente ale naturii din Romania, Casa de Editură și comerț "Scaiul", București. 7. Primack, R.P., Pătroescu, M., Rozyłowicz, L., Ioja, C., 2002, Conservarea biodiversității biologice, Ed. Tehnică, București		
8.2 Seminar	Methods of teaching	No. of hours/Remarks

		2
1. Introductory notions. Organizational problems	Expository method Conversational method	4
2. Plant and animal taxonomic scale	Conversational method Working with botanical and zoological atlases Cooperative learning	2
3. The biogeographic area. Mapping methods and cartographic representation of biogeographic areas. The importance of cartographic representation of areas	Explication Cartographic method Modeling Computer aided training	2
4. The architectural model of the vegetal formations: biogeographical file; vegetation pyramid	Expository - conversational methods Explication Graphic methods	2
5. Biogeographic profile - method for evaluating the dynamics of the vegetation cover on a certain alignment; its role in highlighting the impact of tourism activities on the abundance and dominance of floristic species on tourist routes and in their vicinity.	Explication Problem Graphic and cartographic method Computer aided training	2
6. Strategies for tourist capitalization of the biotic envelope in protected areas. Case studies	Case study Analyze Deductive method Cooperative learning	2
Bibliography		
1. Pătroescu, M., 1987. Indici ecometrici climatici și raportul lor cu învelișul biotic în spațiul Subcarpaților dintre Râmnicu Sărat și Buzău. Analele Universității București. Seria Geografie, 80-82.		
2. Manea Gabriela (2003) – Naturalitate si antropizare in Parcul Natural Portile de Fier, Ed.Universitatii din Bucuresti		
3. Manea Gabriela (2005) – Zone si arii protejate si valorificarea lor in turism, Ed.CREDIS, Bucuresti		
4. Manea, G., 2009. Indicatori și indici de apreciere a potențialului bioclimatic al Defileului Dunării. Comunicări de Geografie, vol. VIII,441-444		
5. Sătmari, A., 2010. Lucrări practice de biogeografie. Editura Eurobit, Timișoara.		
6. Manea, G., Vijulie, I., Matei, I., Cuculici, R., Tîrlă, L., 2013. Constraints and Challenges in the Creation and Public Use of the Protected Areas within the City. Case Study: Lake Văcărești – Bucharest, Conference volume 5th Symposium for Research in Protected Areas, 10-12 June 2013, Mittersill, Austria, 491-496. Available on: www.landesmuseum.at/datenbanken/digilit/?serienr=20669 (accessed 20.09.2013).		

* The content, respectively the number of hours allocated to each course / seminar / laboratory / project will be detailed during the 14 weeks of each semester of the academic year.

9. Corroboration of discipline content with the expectations of the epistemic community, professional associations and representative employers from the field corresponding to the study programme

The content of the discipline is found in the curriculum of the specialization of Environmental Engineering and from other university centers that have accredited these specializations.

10. Evaluation

Type of activity	10.1 Evaluation criteria	10.2 Evaluation methods	10.3 Percentage of the final grade
10.4 Course	Assessment of accumulated theoretical knowledge	colloquy	50%
10.5 Seminar	Evaluation of the theoretical and practical knowledge accumulated at the seminar	test	50%
10.6 Laboratory			
10.7 Project			
10.8 Minimum standard of performance			
<ul style="list-style-type: none"> • Minimum grade 6 test • Minimum grade 5 colloquium 			

Date of completion

Signature of course holder**

Lecturer PhD. eng **AGUD ELIZA**
(eliza_agud@yahoo.com)

Signature of seminar
laboratory/project holder **

Lecturer PhD dr. eng **AGUD ELIZA**
(eliza_agud@yahoo.com)

Date of approval in the department

Signature of the Head of Department

Conf.univ. PhD. eng. **LASLO VASILE**

Dean signature

Prof. PhD. Eng. **CHEREJI IOAN**

** - Name, first name, academic degree and contact details (e-mail, web page, etc) will be specified.

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