

BACHELOR 'S PROGRAMME
2ND YEAR OF STUDY, 2ND SEMESTER

COURSE TITLE	ECOLOGY
COURSE CODE	JM2409
COURSE TYPE	full attendance/ tutorial
COURSE LEVEL	1 st cycle (bachelor's degree)
YEAR OF STUDY, SEMESTER	2 nd year of study, 2 nd semester
NUMBER OF ECTS CREDITS	6
NUMBER OF HOURS PER WEEK	4 (2 lecture hours + 2 seminar hours)
NAME OF LECTURE HOLDER	Lecturer Adrian URSU
NAME OF SEMINAR HOLDER	PhD Student Vasile JITARIU
PREREQUISITES	Advanced level of English
A	GENERAL AND COURSE-SPECIFIC COMPETENCES
	<p>General competences:</p> <p>→ Acquiring the adequate professional and transversal competencies, according to the specific requirements of the subject and the qualifications listed in the National Index of Higher Education Qualifications (RNCIS) for Geography of the Environment</p> <p>Course-specific competences:</p> <p>→ Define the main notions and concepts specific to the field</p> <p>→ Understands, in an integrated way, the elements of the interaction between nature and society</p>
B	LEARNING OUTCOMES
	<p>→ Use modern mapping techniques to analyze various phenomena and processes with an impact on the environment</p> <p>→ Analyze phenomena and processes of environmental impact in a given territory by applying specific algorithms for investigation, interpretation and evaluation</p> <p>→ Develop studies, including cartographic materials, that can serve as a support in sustainable development planning</p>
C	LECTURE CONTENT
	<p>Introductory notions: Ecology. Definition, history, importance.</p> <p>Biological systems - general features.</p> <p>Ecosystem: meanings of the concept of ecosystem and composition.</p> <p>Biotope. Abiotic factors and their role in ecosystems: climatic factors, geographical factors, mechanical factors, chemical factors. Vegetation floors in Romania.</p> <p>Biocenosis. Structure and structural indices of the biocenosis.</p> <p>Biotic factors and their role in the ecosystem. Relationships: independence, neutrality, competition, antagonism, exploitation, commensalism and cooperation</p> <p>Cyclic changes (Fluctuations). Linear changes (successions).</p> <p>Structure of ecosystems: spatial structure, trophic structure, biochemical structure.</p> <p>Fundamental states of the ecosystem. Trophic chains: definition, fundamental types. Ethonian pyramid.</p> <p>Ecological niche: definition, meanings.</p> <p>Flows in ecosystems: energy flow: (energy sources, phases of energy flow, principles of thermodynamics in the ecosystem, energy flow models), information flow which influences the circulation of the substance in ecosystems.</p> <p>Types of ecosystems.</p> <p>Ecological homeostasis: heterogeneity, complexity, stability.</p> <p>Ways to damage ecosystems.</p> <p>Protection of Ecosystems</p>
D	RECOMMENDED READING FOR LECTURES
	<ol style="list-style-type: none"> 1. Cotigă, C. – Ecologie și protecția mediului. Editura Sitech, Craiova, 2004 2. Cupsa D. - Ecologie (http://bioresearch.ro/stiinte/download/biologie/Cupsa%20D%20-%20Ecologie-Note%20de%20Curs.pdf) 3. Odum E.P. (1971) – Fundamentals of ecology, Sanders, Londres 4. Stugren B. (1994) – Ecologie teoretică, Ed. Sarmis, Cluj 5. Șchiopu, D. – Ecologie și protecția mediului. Editura Ion Ionescu de la Brad, Iași, 2002
E	SEMINAR CONTENT
	<p>Labor protection.</p> <p>In-depth and interactive explanation of the ecosystem notions</p> <p>Methods of quantitative research of populations and biocenoses.</p>

	Project: Characterization of an Ecosystem at choice Field trip Study of phytocenoses. Field trip Horizontal and vertical structure of phytocenoses. Determining the composition of phytocenosis. Project: Habitat prediction Mapping vegetation. Bonitation of vegetation.
F	RECOMMENDED READING FOR SEMINARS
	1. Cotigă, C. – Ecologie și protecția mediului. Editura Sitech, Craiova, 2004 2. Cupsa D. - Ecologie (http://bioresearch.ro/stiinte/download/biologie/Cupsa%20D%20-%20Ecologie-Note%20de%20Curs.pdf) 3. Odum E.P. (1971) – Fundamentals of ecology, Sanders, Londres 4. Stugren B. (1994) – Ecologie teoretică, Ed. Sarmis, Cluj 5. Șchiopu, D. – Ecologie și protecția mediului. Editura Ion Ionescu de la Brad, Iași, 2002
G	EDUCATION STYLE
LEARNING AND TEACHING METHODS	Lecture, explanation, problematization, case study
ASSESSMENT METHODS	Examination + Seminar Grades
LANGUAGE OF INSTRUCTION	English