



No. _____ of _____

USAMV form 0102030109 (discipline code)

SUBJECT OUTLINE**1. Information on the programme**

1.1. Higher education institution	University of Agricultural Sciences and Veterinary Medicine of Cluj-Napoca
1.2. Faculty	Agriculture
1.3. Department	Plant culture
1.4. Field of study	Agronomy
1.5. Cycle of study ¹	Bachelor
1.6. Specialization/ Study programme	Mountain agriculture
1.7. Form of education	Full time

2. Information on the discipline

2.1. Discipline name	Biodiversity							
2.2. Course coordinator	Lect. Florin Pacurar PhD							
2.3. Seminar/ laboratory/ project coordinator	Lect. Florin Pacurar PhD							
2.4. Year of study	III	2.5. Semester	II	2.6. Evaluation type	Summative	2.7. Discipline status	Content ²	DU
							Compulsoriness ³	DO

3. Total estimated time (teaching hours per semester)

3.1. Hours per week – full time programme	2	out of which: 3.2. lecture	2	3.3. seminar/ laboratory/ project	2
3.4. Total number of hours in the curriculum	56	out of which: 3.5. lecture	28	3.6. seminar/laboratory	28
Distribution of the time allotted					hours
3.4.1. Study based on books, textbooks, bibliography and notes					22
3.4.2. Additional documentation in the library, electronic platforms and field experiences					15
3.4.3. Preparing seminars/ laboratories/ projects, subjects, reports, portfolios and essays					13
3.4.4. Tutorials					4
3.4.5. Examinations					10
3.4.6. Other activities					
3.7. Total hours of individual study	64				
3.8. Total hours per semester	120				
3.9. Number of credits ⁴	4				

4. Prerequisites (if applicable)

4.1. curriculum-related	Ecology, Botany, Pedology
4.2. skills-related	Student must have knowledge about the structure and functions of ecosystems and agroecosystems.

5. Conditions (if applicable)

5.1. for the course	The course is interactive, students may ask questions about the lecture content. University discipline requires strict observance of course start and end times. No other activities are tolerated during the lecture. Personal devices must be turned off.
5.2. for the seminar/ laboratory/	Consulting the handbook is required during seminars/labs, as each student will

project	work individually with available materials which are described in the handbook. Academic discipline is required for the entire duration of lab hours.
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6. Cumulated specific competences

Professional competences	<p>Understanding general notions about biodiversity.</p> <p>Understanding biodiversity types. Understanding the value of biodiversity.</p> <p>Being knowledgeable of theoretical notions about "in situ" conservation.</p> <p>Being knowledgeable of theoretical notions about "ex situ" conservation.</p> <p>Understanding the definition and classification of protected natural areas.</p> <p>European and Romanian insights into the Natura2000 project concerning biodiversity.</p> <p>The role of biodiversity in the evolution of human life.</p>
Transversal competences	<p>To demonstrate the capacity to analyse research directions in areas of interest.</p> <p>To imagine relevant scientific activities and to produce their synthesis within interdisciplinary projects.</p> <p>To demonstrate care for professional improvement by practising investigations about optimizing research model.</p> <p>To participate and propose in the formation of research teams with the aim of increasing research performance.</p>

7. Discipline objectives (based on the cumulated specific competences)

7.1. General objective	Students receive ideas about the evolution and classification of species and the about the definition and classification of biodiversity.
7.2. Specific objectives	<p>To know the definition and classification of biodiversity.</p> <p>To develop the capacity to present ideas about the emergence and evolution of species.</p> <p>To understand the trends in biodiversity change as a result of societal development.</p>

8. Content

8.1. COURSE Number of hours - 28	Teaching methods	Observation
Defining the main concepts about Biodiversity.	Lecture	1 lecture = 2 hours
The value of biodiversity. The evaluation and economic quantification of biodiversity.	Lecture	1 lecture = 2 hours
Types of biodiversity: Genetic biodiversity (intraspecific) – general aspects, methods of revealing intraspecific biodiversity.	Lecture	1 lecture = 2 hours
Types of biodiversity: Species biodiversity (interspecific) – species richness and species categories, mapping hotspots, diversity indices, total number of species, correlations and comparisons of species richness.	Lecture	2 lectures = 4 hours
Types of biodiversity: Ecosystem diversity – definitions and methods of evaluation, types of biomes on Earth, landscapes and landscape elements	Lecture	2 lectures = 4 hours
Types of biodiversity: Cultural diversity – definitions, importance for conservation, the people's attitude towards nature, human settlements, homesteads, agriculture, animal farming, forestry, religious and spiritual practices, languages and traditions.	Lecture	2 lectures = 4 hours
Conservation of biodiversity – general aspects	Lecture	1 lecture = 2 hours
In situ conservation – zoological species categories, categories of protected areas, protected areas in Romania	Lecture	1 lecture = 2 hours
Ex situ conservation – general aspects, thematic collections, gene banks, in situ conservatories	Lecture	1 lecture = 2 hours
Ecological education (environmental)	Lecture	1 lecture = 2 hours
Evaluation		

8.2. PRACTICAL WORKS Number of hours - 28	Teaching methods	Observation
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Context and general aspects: evolution, biodiversity, the important of biodiversity, climate change and biodiversity	Seminar	1 lab work (2 hours/work)
Use value, ecological value, future option value. Evolution and speciation.	Debate / practical works	1 lab work (2 hours/work)
Evolution and speciation, intraspecific biodiversity, life's interconnectedness (shared ancestry), information transformation, game of mixing colors	Debate / practical works	1 lab work (2 hours/work)
Types of landscapes, drawing exercise, discussion and debates, presentations of student's home landscape	Debate / practical works	2 lab work (4 hours/work)
Cultural diversity. Landscape elements, examples, drawing exercise: cultural and rural landscape elements.	Debate / practical works	1 lab work (2 hours/work)
Biodiversity at home: exercise in searching for species in their home area, categorizing them and presenting them (each student)	Debate / practical works	1 lab work (2 hours/work)
Biodiversity conservation: in situ conservation and zoological categories of species	Debate / practical works	2 lab work (4 hours/work)
Biodiversity conservation: in-situ conservation – identifying and mapping protected areas, management of protected areas, types of protected areas, protected areas of Romania	Debate / practical works	2 lab work (4 hours/work)
Biodiversity conservation: ex situ conservation. Planning and managing a protected area, main characteristics of the plan, contents of the plan.	Debate / practical works	2 lab work (4 hours/work)
Producing a conservation plan	Debate / practical works	1 lab work (2 hours/work)
Evaluation	Written exam	
<p><i>Compulsory bibliography:</i></p> <ol style="list-style-type: none"> 1. Course book or course presentations 2. Vasile CRISTEA, Simone DANAIEYER, "De la biodiversitate la OGM-uri" 3. Ioan ROTAR, Florin PĂCURAR, 2011, "ECOPRATOLOGIE" 		
<p><i>Optional bibliography:</i></p> <ol style="list-style-type: none"> 1. Sinclair et.al, 2006, "Wildlife ecology, conservation, and management. Second edition." Blackwell Publishing. 2. Carlier L., I. Puia, I. Rotar, "For a better grass production", Risoprint Publishing. 3. Romanian Journal of Grassland and Forage Crops 		

9. Corroborating the discipline content with the expectations of the epistemic community representatives, of the professional associations and of the relevant employers in the corresponding field

In order to identify means of modernization and continuous improvement in teaching and building courses by means of updating information and didactic solutions, the teaching personnel participates in the annual reunion of the Romanian Grassland Society (SRP) where they also meet with farmers and debate present challenges in the use of grasslands and the production of forage crops in Romania and Europe.

10. Evaluation

Type of activity	10.1. Evaluation criteria	10.2. Evaluation type	10.3. Percentage of the final grade
10.4. Course	Can describe biodiversity and has knowledge	summative(E)	70%

	<p>of biodiversity types and its value. Has knowledge of evolution and species classification. Can show the ability to analyse in/ex situ biodiversity</p>		
<p>10.5. Seminar/Laboratory</p>	<p>Can show the ability to define the types of biodiversity. Has knowledge of the effects of development on biodiversity, species extinction and cultural diversity. Has the ability to present the conservation status of an area in continuously changing world</p>	<p>continuous(VP) in 2 rounds</p>	<p>30%</p>
<p>10.6. Minimum performance standards</p>			
<p>Mastering the scientific information communicated within the course at an acceptable level. Obtaining a passing grade at continuous evaluations (VP).</p>			

- 1 Cycle of studies - choose one of the three options: Bachelor/Master/Ph.D.
- 2 according to the educational plan
- 3 Discipline status (compulsoriness) - choose one of the options – DI (compulsory discipline) DO (optional discipline) DFac (facultative discipline).
- 4 One credit is equivalent to 25-30 hours of study (teaching activities and individual study).

Filled in on
04.09.2019

Course coordinator
Lect. Florin Păcurar PhD

Laboratory work/seminar coordinator
Lect. Florin Păcurar PhD




Approved by the
department on
05.09. 2019

Head of the Department
Prof. Duda Marcel PhD

