UNIVERSITATEA DE ŞTIINŢE AGRICOLE ŞI MEDICINĂ VETERINARĂ CLUJ-NAPOCA
Facultatea de Agricultură
Calea Mănăştur 3-5, 400372, Cluj-Napoca, România
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No._____of _____

USAMV form 0102030106 (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	**Pratology and pratotechnics**							
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	I	2.6. Evaluation type	**Continuous**	2.7. Discipline status	Content[2]	**DS**
							Compulsoriness[3]	**DI**

3. Total estimated time (teaching hours per semester)

3.1. Hours per week – full time programme	4	**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					**15**
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	Botany, Pedology, Agrochemistry
4.2. skills-related	Student must have knowledge about particular biological aspects of plants, the soil and climate requirements of plants and the systematics of the plants.

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.

6. Cumulated specific competences

Professional competences	Being knowledgeable of the agronomic vocabulary specific to Pratology. Being knowledgeable of the importance of grasslands and their distribution globally and in Romania. Being able to recognize the main grassland species. Being knowledgeable of the grassland classification systems. Being knowledgeable of the requirements of plant species under ecological and agronomical conditions.
Transversal competences	Being able to write plans for forage management for farms in different climatic conditions. Being able to propose research activities for studying phytocoenoses

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

7.1. General objective	Knowing of the importance, the ecology, the classification and the management of grassland ecosystems in mountain areas..
7.2. Specific objectives	Understanding the distribution of grasslands in Romania and Europe. Knowing the composition and structure of prairie ecosystems. Knowing the parameters that influence the dynamic of pratoecosytems. Knowing the main types of grasslands and being able to identify the most important forage species.

8. Content

8.1. COURSE **Number of hours – 28**	Teaching methods	Observation
Introduction: defining pratology, the distribution of grasslands globally and in Romania, grassland nomenclature	Lecture	1 lecture = 2 hours
Grassland multifunctionality. The importance of grassland ecosystems at the cultural landscape level. The importance of protecting grassland ecosystems.	Lecture	1 lecture = 2 hours
Classification of habitats based on intensity of management (intensity gradient), hemeroby, management types, floristic composition, stationary conditions etc.	Lecture	1 lecture = 2 hours
The grassland ecosystem. The composition and structure of the prairie ecosystem. The energy flow, the matter cycles and the information flow. The biogeochemical cycle of certain macroelements in nature and their impact on grassland ecosystems.	Lecture	2 lectures = 4 hours
The prairie ecosystem's environment: abiotic factors, description and classification	Lecture	1 lecture = 2 hours
Prairie ecosystem dynamics: changes in grass cover, allogenous and auto and autogenous fluctuations, succession.	Lecture	1 lecture = 2 hours
Grassland vegetation: *Poaceae, Fabaceae, Cyperaceae, Juncaeae* & other botanical families (forbs)	Lecture	2 lectures = 4 hours
Plant requirements: ecological factors	Lecture	1 lecture = 2 hours
Plant requirements: agronomical factors	Lecture	1 lecture = 2 hours
The biodiversity of grassland ecosystems: concepts, classifications systems, ecological zoning, basic grassland unit types. The steppe zone, the nemoral zone, the nemoral level – eco-pedological conditions, series, types. Azonal and extrazonal grasslands – eco-pedological conditions, series, types.	Lecture	2 lecture = 4 hours
The study of grass cover and the analysis of data from floristic samples	Lecture	1 lecture= 2 hours
Evaluation		

8.2. PRACTICAL WORKS **Number of hours – 28**	Teaching methods	Observation
Poaceae (Gramineae) – main characteristics. Graminoids with spikes (inflorescence) and with spiciform panicles.	Practical works	1 lab work (2 hours/work)
Poaceae with panicules	Practical works	1 lab work (2 hours/work)
Recognizing *Poaceae* seeds	Practical works	1 lab work (2 hours/work)
Examination	Oral/practical	1 lab work (2 hours/work)
Legumes (*Fabaceae*) – main characteristics. Cultivated legumes.	Practical works	1 lab work (2 hours/work)
Spontaneous legumes	Practical works	1 lab work (2 hours/work)
Recognizing *Fabaceae* seeds	Practical works	1 lab work (2 hours/work)
Examination	Oral/practical	1 lab work (2 hours/work)
Cyperaceae (sedges) & *Juncaeae* (rushes)	Practical works	1 lab work (2 hours/work)
Plants from other botanical families (forbs) – main characteristics, species consumed by animals	Practical works	1 lab work (2 hours/work)
Plants from other botanical families (forbs) – species not consumed by animals, species toxic to animals or animal products	Practical works	1 lab work (2 hours/work)
Plants from other botanical families (forbs) – species which deteriorate grasslands, semi-parasitic and parasitic species	Practical works	1 lab work (2 hours/work)
Examination	Oral/practical	1 lab work (2 hours/work)

Compulsory bibliography:

1. *Rotar I., (1996) – Notițe de curs*
2. *ROTAR I., CARLIER L., (2010), Cultura pajiștilor, Ed. RisoPrint*
3. *PUIA I., et. All. (1991), Cultura pajiștilor și a plantelor furajere, Ed.. Did. Si Ped. București*
4. *ROTAR I., VIDICAN R., SIMA N., (2005), Cultura pajiștilor și a plantelor furajere – ghid practic, Ed. RisoPrint*
5. *VÂNTU V., A. MOISUC, G. MOTCĂ, I. ROTAR, (2004), Cultura pajiștilor și a plantelor furajere, Ed. „Ion Ionescu de la Brad".*

Optional bibliography:

1. *Carlier, L., I. Puia, I. Rotar,For a better grass production, Ed. Risoprint,*
2. *Buletinul ICPCP Brașov,*

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	Understanding the life of natural and seminatural grassland ecosystems. Knowing grassland vegetation. Knowing the criteria for grassland typological classification. Maintenance of seminatural grasslands	continuous(VP)	70%
10.5. Seminar/Laboratory	Identifying *Poaceae* species with spike, spiciform panicule, and panicule. Identifying *Poaceae* seeds. Identifying *Fabaceae* species and their seeds. Identifying *Cyperaceae & Juncaeae* grassland species. Identifying species from other botanical families.	continuous(VP) in 3 rounds	30%
10.6. Minimum performance standards			
Mastering the scientific information communicated within the course at an acceptable level. Obtaining a passing grade at continous evaluations (VP).			

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