



No. _____ of

USAMV form 0108010210

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	II Crops science
1.4. Field of study	Agronomy
1.5. Cycle of study¹	Master
1.6. Specialization/ Study programme	Organic farming
1.7. Form of education	Full time

2. Information on the discipline

2.1. Discipline name		Natural resources from spontaneous flora					
2.2. Course coordinator			Phd. lecturer Rodica Varban				
2.3. Seminar/ laboratory/ project coordinator			Phd. lecturer Rodica Varban				
2.4. Year of study I	2.5. Semester	I	2.6. Evaluation type	continous	2.7. Discipline status	Content²	DC
						Compulsoriness³	DI

3. Total estimated time (teaching hours per semester)

3.1. Hours per week – full time programme	3	out of which: 3.2. lecture	1	3.3. seminar/ laboratory/ project	2
3.4. Total number of hours in the curriculum	42	out of which: 3.5. lecture	14	3.6. seminar/laboratory	28
Distribution of the time allotted					hours
3.4.1. Study based on books, textbooks, bibliography and notes					20
3.4.2. Additional documentation in the library, electronic platforms and field experiences					10
3.4.3. Preparing seminars/ laboratories/ projects, subjects, reports, portfolios and essays					10
3.4.4. Tutorials					10
3.4.5. Examinations					8
3.4.6. Other activities					
3.7. Total hours of individual study	58				
3.8. Total hours per semester	100				
3.9. Number of credits⁴	4				

4. Prerequisites (if applicable)

4.1. curriculum-related	Botany, general notions, Plant morphology and anatomy, Systematic Botany
4.2. skills-related	-

5. Conditions (if applicable)

5.1. for the course	The university discipline requires the observance of the start and end time of the course.
5.2. for the seminar/ laboratory/ project	In the practical work it is compulsory to consult the grass, each student will carry out an individual activity with the press materials made available. Academic discipline is required throughout the duration of the work.

6. Cumulated specific competences

Professional competences	<p>Knowing the history of the use of medicinal plants.</p> <p>Knowledge of the chemical composition of medicinal and aromatic plants.</p> <p>Identification of plants with therapeutic action.</p> <p>Acquiring the therapeutic effects of medicinal plants from spontaneous flora.</p> <p>Identification of edible mushrooms and berries</p>
Transversal competences	<p>Identification of the medicinal plants used in different diseases and of the berries.</p> <p>Assimilation of general concepts regarding the morphology and biology of fungi.</p>

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

7.1. General objective	<p>Presentation of medicinal plants and classification into systematic categories, with which they operate in systematic botany</p> <p>Knowledge of the scientific nomenclature and the therapeutic effects of medicinal plants of botanical and pharmacognostic information, ecology, spread, medicinally used part, period and mode of harvesting, data on chemical composition, therapeutic indications and phytotherapeutic products in which they are found</p> <p>Assimilation of general concepts regarding the morphology and biology of fungi</p> <p>Knowing the benefits of consuming berries</p>
7.2. Specific objectives	<p>Systematic presentation of medicinal plants and their grouping according to the active principles</p> <p>Knowledge of the specific flora of Romania and of the main medicinal plants of spontaneous flora</p> <p>Identification of the berries used in the food, pharmaceutical and cosmetic industry</p> <p>Assimilation the minimum terminology needed to accurately identify edible mushroom species</p>

8. Content

8.1. COURSE Number of hours -14	Teaching methods	Observation
1. The importance of medicinal plants: vegetative organs (root, stem, leaves), generative (flowers, fruits, seeds), metamorphosed	Lecture	1 Lecture
2. Methods for the recognition of medicinal plants. The dichotomous key of determination	Lecture	2 Lectures
3. Systematic classification and description of plants from spontaneous flora	Lecture	3 Lectures
4. Rare medicinal plants and their protection	Lecture	2 Lectures
5. Collection, drying and preservation of medicinal plants	Lecture	2 Lectures
6. Berries. Assortments of berries. Harvesting	Lecture	2 Lectures
7. Edible mushrooms. Mushroom morphology and biology. Mushroom harvesting and recovery	Lecture	2 Lectures

8.2. PRACTICAL WORKS Number of hours - 28	Teaching methods	Observation
1. Binary nomenclature of plants. Systematic categories. Presentation of vegetative organs (root, stem, leaves), generative (flowers, fruits, seeds) and metamorphosed organs	Description and recognition of herbs	3 labs work
2. Determination of medicinal plants with the help of determinants and identification of parts of the plant with medicinal properties	Determination and recognition of plants from grass and fresh material	2 labs work
3. Presentation and description of medicinal plants	Description and recognition of herbs	2 labs work
4. Collection, drying and storage of medicinal plants	Presentation of methods of collecting and preserving medicinal plants	1 lab work

5. Assortment of berries	Description and recognition of herbs and fresh plants.	2 labs work
6. Edible mushrooms	Presentation of botanical characters for the recognition of edible fungi (molds). Capitalizing on mushrooms with food value.	2 labs work
7. Presentation of themes prepared by the master's students, having as topics natural resources from spontaneous flora (each student presents medicinal plants used in different conditions, the use of berries and edible mushrooms (by extension to lot).	Comments on the preparation, presentation and correctness of the data presented. Recognition of edible plants and fungi (herbarium, fresh material)	Presentation of themes +practical exam
Compulsory bibliography:		
<ol style="list-style-type: none"> 1. L. S. Muntean et al., 2007, Treatise on cultivated medicinal plants and spontaneous flora, Risoprint Publishing House Cluj-Napoca 2. M. Tămaș et al., 2005, Guide for the recognition and harvesting of medicinal plants, vol I, Spontaneous Flora, Dacia Cluj-Napoca Ed. 3. D. Vârban, Rodica Vârban, 2005, Medicinal plants cultivated and from spontaneous flora, Risoprint Ed. Cluj-Napoca 4. Rodica Vârban, D. Varban, 2017, Medicinal plants grown from spontaneous flora, Bioflux Ed. Cluj-Napoca 5. Elena Cristina Mincu, Razvan Tuculescu, 2010, Mushrooms from România, Ed. Galaxia Gutenberg 6. Ioana Tudor, 2010, Mushrooms from the spontaneous flora of Romania, Gramen Ed 7. Vasas Gizella, Locsmándi Csaba, 2013, Mushroom picker's guide, Ed. Casa 8. A. Asănică, D. Hoza, 2013, Pomology, Ed. Ceres 		
Optional bibliography: Rodica Vârban, Florin Păcurar, Dictionary of botany, pratology and agroecology, 2011, Ed. Risoprint Cluj-Napoca,		
2. Atlases, determinants of plants, flora of Romania etc.		

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

Botanical terminology is constantly compatible with international terms, used in particular by English and German literature. The international character of the biological and botanical terminology was emphasized.

10. Evaluation

Type of activity	10.1. Evaluation criteria	10.2. Evaluation type	10.3. Percentage of the final grade
10.4. Course	Phylogenetic considerations on the Plantae Kingdom, Classification of living organisms, description of medicinal plants and their content in active principles. Assortments of berries. Edible mushrooms.	continuous	70 %
10.5. Seminar/Laboratory	Description and recognition of plants and fungi in grass, molds or living material, according to morphological characters. Presentation of the themes	Practical exam	30 %
10.6. Minimum performance standards			
Mastery of scientific information transmitted through lectures and practical papers at an acceptable level. Obtaining the minimum mark for the practical exam is a condition of promotability..			

- 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
Phd. lecturer Rodica Varban

Laboratory work
Phd. lecturer Rodica Vârban

Approved by the
department on
05.092019

Head of the Department
Pdh. professor Marcel M. DUDA