



No. \_\_\_\_\_ of \_\_\_\_\_

USAMV form 0101030103

## 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 Crop Science
1.4. Field of study	Agronomy
1.5. Cycle of study <sup>1</sup>	Bachelor
1.6. Specialization/ Study programme	Agriculture
1.7. Form of education	Full time

### 2. Information on the discipline

2.1. Discipline name	Crop technology (Phytotechny) 1							
2.2. Course coordinator	Prof.dr. Marcel M. DUDA							
2.3. Seminar/ laboratory/ project coordinator	Lecturer dr. Sorin MUNTEAN							
2.4. Year of study	III	2.5. Semester	I	2.6. Evaluation type	summative	2.7. Discipline status	Content <sup>2</sup>	DS
							Compulsoriness <sup>3</sup>	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					19
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					5
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 <sup>4</sup>	4				

### 4. Prerequisites (if applicable)

4.1. curriculum-related	Botany, Biochemistry, Pedology, Agrotechnics, Agrochemistry, Agricultural machinery, Phytopathology, Entomology, Irrigation, Plant Physiology
4.2. skills-related	Students must have knowledge of: plant nutrition, physico-chemical properties of soils, biology, morphology and physiology of crop plants, weeds, pests and diseases of cultivated plants, economic thresholds, crop protection products, adjusting machinery, irrigation regime.

### 5. Conditions (if applicable)

5.1. for the course	The course is interactive, students may ask questions regarding the content of the exposure. Academic discipline requires compliance for the time to start and end of the course. No other kind of activities are tolerated during the lecture, mobile phones must be closed.
5.2. for the seminar/	At practical works is mandatory to consult the practical book/tutor. Each student will conduct

laboratory/ project	a single or small groups activity in the laboratory using materials available and described in the practical book/tutor. Academic discipline is imposed for the duration of works.
---------------------	--

## 6. Cumulated specific competences

Professional competences	<p>To know the specific agronomic language of the Phytotechnics discipline.</p> <p>To know how the territory of our country is being used, the structure of the main crops and their favorability areas.</p> <p>To know the factors which determine field plant production.</p> <p>To know the areas of crop production in Romania.</p> <p>To understand the importance and role of the seed in crop production.</p> <p>To know how the seed quality control in our country is being organized.</p> <p>To know the stages of seeds control and certification in our country.</p> <p>To know the biological features of cereal plants.</p> <p>To know the importance of biology, ecology and technology of wheat cultivation.</p>
Transversal competences	<p>To demonstrate concern for continuing professional development.</p> <p>To participate in research in the experimental fields of the discipline.</p> <p>To be able to develop a project to ensure the necessary fertilizers and pesticides in wheat culture knowing their percentage of active substances.</p>

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

7.1. General objective	To acquire knowledge on: the use of the land in our country, factors which determine field plant production, crop zoning, the importance, control and certification of seeds.
7.2. Specific objectives	<p>To understand the reasons for zoning crops and the importance of factors that can increase agricultural production.</p> <p>To assimilate information on system certification and seed quality control in our country.</p> <p>To be able to customize the knowledge of cultivation of cereals, particularly wheat, relations with factors of vegetation and cultivation technology of its elements.</p>

## 8. Content

8.1.COURSE:	Methods of teaching	Observations
<b>GENERAL ISSUES OF PHYTOTECHNY: 14 hours</b>		
<b>Object of phytotechny and the relationship with other sciences</b>		
Object of phytotechny; phytotechny analysis and it's connection with other sciences;	Lectures	1 lecture
<b>Structure of main agricultural crops in Romania and crop production factors</b>		
The method of use for the territory of Romania	Lectures	1 lecture
Factors which determine field plant production	Lectures	1 lecture
<b>Agricultural and ecological zoning of plants</b>		
Crop production areas in Romania; Ecological zoning of agricultural plants.	Lectures	1 lecture
<b>Seed certification and quality control</b>		
The importance and role of seed in crop production	Lectures	1 lecture
Seed quality control organization in the world and in our country, seed and seeding material - biological factor for the crop production;	Lectures	1 lecture
Seed Certification: definition, purpose of seed certification and quality control;		
The causes determining modifying the genetic structure of varieties, loss of production and quality of seeds in different culture conditions; Stages of control and certification of seeds; Act of field inspection and seed conditioning;	Lectures	1 lecture
Controlling the flow of processing and training samples for analysis;		
Laboratory analyzes; Useful seed and the amount of seed per hectare;	Lectures	2 lecture
Documents issued after analysis and certification of seeds.	Lectures	1 lecture
<b>CEREALS: 14 hours</b>		
<b>Generalities: Importance, Biological peculiarities of cereals;</b>	Lectures	1 lecture
<b>Wheat: Importance; Chemical composition; Distribution;</b>	Lectures	1 lecture
<b>Systematics; Origin; Varieties; Biological peculiarities;</b>	Lectures	1 lecture
<b>Requirements for climate and soil; Ecological zones;</b>	Lectures	1 lecture
<b>Cultivation technology: Rotation; Fertilization; Soil works;</b>		



	on the factors which determine agricultural production, quality control and certification of seeds, biology, ecology and technology of cultivation of wheat		70%
<b>10.5. Seminar/ Laboratory</b>	The ability to perform basic analysis of the seeds. Recognition of key species and varieties of wheat. The ability to draw a technology fiche technology for growing wheat.	Testing the determination of the physical ability of seeds, species recognition and the main varieties of wheat technological safety check the technology fiche.	30%
<b>10.6. Minimum performance standards</b>			
Sufficient mastery of the scientific information presented in lectures and practical work. Obtain the pass mark in the practical exam is a condition of participation in the oral examination..			

- 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  
Prof.dr. Marcel M. DUDA

Laboratory work/seminar coordinator  
Lecturer dr. Sorin MUNTEAN

Approved by the  
department on  
05.092019

Head of the Department  
Prof.dr. Marcel M. DUDA