



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

USAMV form 0102030101

**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	Agronomical
1.5. Cycle of study <sup>1</sup>	Bachelor
1.6. Specialization/ Study programme	
1.7. Form of education	Full time

**2. Information on the discipline**

2.1. Discipline name	Special Phytopathology							
2.2. Course coordinator	Lecturer dr. Loredana Suciu							
2.3. Seminar/ laboratory/ project coordinator	Lecturer dr. Loredana Suciu							
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					32
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					18
3.4.4. Tutorials					4
3.4.5. Examinations					15
3.4.6. Other activities					
3.7. Total hours of individual study	84				
3.8. Total hours per semester	140				
3.9. Number of credits <sup>4</sup>	5				

**4. Prerequisites (if applicable)**

4.1. curriculum-related	Botany, Physiology, Agrochemical, Agrotechnics, Genetics, Agricultural machinery, General Phytopathology
4.2. skills-related	The student must have knowledge of the main types of diseases, general and specific characteristics of phytopathogens

**5. Conditions (if applicable)**

5.1. for the course	The course is interactive, students can ask questions regarding the content of the statement.
5.2. for the seminar/ laboratory/ project	At practical work is obligatory practical work guide, each student will conduct a laboratory materials available and described in the practical work guide.

**6. Cumulated specific competences**

Professional competences	To know the language specific to the discipline of Phytopathology agronomic. To acquire the main diseases of major crops. To recognize the main types of crop diseases. To know the integrated complex of prevention and control of crops diseases. To know how evolves the attack of pathogens on the base of biology knowledge and the technology applied to attacked crop.
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<b>Transversal competences</b>	<p>To demonstrate the ability to create a system for prevent and combat plant diseases in a farm by the cultures .</p> <p>To develop prognoses projects and warning of pathogens on farms in different climatic conditions</p> <p>To be able scientific thinking on plant diseases, including the fitting of experimental field experiences</p> <p>To demonstrate concern about professional development by engaging in investigations on the economic impact of pathogens</p> <p>To participate in research experiences in the field of discipline</p>
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### 7. Discipline objectives (based on the cumulated specific competences)

7.1. General objective	To acquire knowledge of the main pathogens and the diseases they cause in crops.
7.2. Specific objectives	<p>To understand the life cycle of pathogens.</p> <p>To assess the degree of pathogen attack in farm.</p> <p>To know the factors that influence the infection of pathogens.</p> <p>To be able to formulate a system of integrated control of diseases in a farm.</p>

### 8. Content

8.1. COURSE Number of hours -28	Teaching methods	Observation
<p><b>The cereals diseases grown in sub-area and the mountain. The complex of prevention and control measures</b></p> <p><b>The potato diseases. The complex of prevention and control measures</b></p> <p><b>The forage plant diseases. The complex of prevention and control measures</b></p> <p><b>The vegetables diseases grown in the sub-area and the mountain. The complex of prevention and control measures</b></p> <p><b>The tree species diseases grown in sub-area and the mountain. The complex of prevention and control measures</b></p> <p><b>The fruit bushes diseases. The complex of prevention and control measures</b></p> <p><b>The forestry species disease. The complex of prevention and control measures</b></p>	Lectures	1 lecture=2 hours 3 lectures
		1 lectures 2 lectures
		3 lectures
		3 lectures
		1 lectures
		1 lectures
		1 lectures

8.2. PRACTICAL WORKS Number of hours - 28	Teaching methods	Observation
<p>Crop plant health assessment and collection of biological material.</p> <p>The cereals and maize diseases: wheat diseases, barley and oats diseases, rye and corn diseases.</p> <p>The potato diseases.</p> <p>The beans diseases</p> <p>The forage plant diseases</p> <p>The vegetable diseases: tomatoes diseases, eggplants and peppers diseases, onion diseases, cucumbers and cabbage diseases.</p> <p>The fruit tree diseases: pome species diseases, stone species diseases.</p> <p>The fruit bushes diseases.</p> <p>The forestry species diseases.</p> <p>Practical exam</p>	<p>Herbarium study</p> <p>- Study of drawings staff</p> <p>- Realization of microscopic preparations</p>	1 lab work (2 hours/work) 1 lab work
		3 lab work
		1 lab work 1 lab work 2 lab work
		2 lab work
		1 lab work 1 lab work 1 lab work
		1 lab work
		1 lab work
<p><i>Compulsory bibliography:</i></p> <p>1. Florian V. - 2001, Fitopatologie generală, Ed. Poliarn, Cluj-Napoca.</p> <p>2. Bobeş I. - 1983, Atlas de Fitopatologie și protecția agroecosistemelor, Ed. Ceres, București.</p> <p>3. Oroian I., Puia Carmen, Șerba I. - 2002, Practicum de Fitopatologie, Ed. Poliarn Cluj-Napoca</p> <p>4. Oroian I. V. Florian, L. Holonec. - 2006, Atlas de Fitopatologie, Ed. Academiei Române, București</p>		
<p><i>Optional bibliography:</i></p> <p>1. Baicu T., Săvescu A. - 1986, Sisteme de combatere integrată a bolilor și dăunătorilor pe culturi, Ed. Ceres, București.</p> <p>2. Bobeş I. - 1983, Atlas de Fitopatologie și protecția agroecosistemelor, Ed. Ceres, București.</p> <p>3. Hatman M. și col. - 1989, Fitopatologie, E.D.P., București.</p> <p>4. Pop I.V. - 1987, Virusurile și virozele plantelor, Ed. Ceres, București</p> <p>5. Popescu Gh. - 1993, Fitopatologie, Ed. Tehnică, București.</p> <p>6. Popescu Gh. - Tratat de Patologia Plantelor, Vol I-III, ed. Eurobit, timișoara</p> <p>7. Puia Carmen - 2003, Patologie vegetală, Ed. Digital Data, Cluj-Napoca;</p>		

8. Severin V. și col. - 1985, Bacteriozele plantelor cultivate, Ed. Ceres, București.  
 9. Severin V. și col. - 1985, Bacteriozele plantelor cultivate, Ed. Ceres, București.  
 • • • Revista "Protecția plantelor", Ed. Poliam, Cluj - Napoca.

**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 some ways of upgrading and continuous improvement of teaching and course content with the current issues and practical problems, the teachers attend the annual meeting of the Society of Plant Protection Transylvania where they meet experts and farmers and they discuss current and future issues in the integrated control of crop diseases

**10. Evaluation**

Type of activity	10.1. Evaluation criteria	10.2. Evaluation type	10.3. Percentage of the final grade
<b>10.4. Course</b>	The knowledge of the patography of main diseases and the pathogenesis process. The knowledge of pathogens characters. The knowledge of diseases prevention and the control measures within the integrated concept	Exam	80%
<b>10.5. Seminar/Laboratory</b>	Principles of plant disease diagnosis The knowledge of the general characteristics of pathogens The knowledge of the specific characters of the main pathogens and their systematic classification Microscopic determination of the main types of spores Knowing and determining the sanitary status of the crops	Practical exam	20%
<b>10.6. Minimum performance standards</b>			
Knowing the scientific information from lectures and practical work at an acceptable level. Obtaining the pass mark in continuous assessment is the condition of graduation..			

- 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  
Lecturer dr. Loreana SUCIU

Laboratory work/seminar coordinator  
Lecturer dr. Loreana SUCIU

Approved by the  
department on  
05.09.2019

Head of the Department  
Prof. dr. Ioan OROIAN