

University of Oradea	PROCEDURE for the initiation, approval, monitoring and periodic evaluation of programmes of study	CODE: SEAQ PE – U. 01					
			4				4
			Approved in the Senate meeting from: --03.03.2014				

Annex 6

DISCIPLINE DESCRIPTION

1. Information on the study programme

1.1 Academic institution	UNIVERSITY OF ORADEA
1.2 Faculty	FACULTY OF ENVIRONMENTAL PROTECTION
1.3 Department	AGRICULTURE - HORTICULTURE
1.4 Field of study	AGRONOMY
1.5 Cycle of study	BACHELOR
1.6 Study programme/Qualification	AGRICULTURE / ENGINEER

2. Information on the discipline

2.1 Name of discipline	PHYTOPATOLOGY I						
2.2 Course holder	Stanciu Alina Ștefania						
2.3 Seminar/Laboratory/Project holder	Stanciu Alina Ștefania						
2.4 Year of study	II	2.5 Semester	III	2.6 Type of evaluation	EX	2.7 Regime of discipline	C

(C) Compulsory; (O) Optional; (E) Elective

3. Total estimate time (hours per semester of didactic activities)

3.1 Number of hours per week	4	out of which: 3.2 course	2	out of which 3.3 seminar/laboratory/project	2
3.4 Total hours in the curriculum	5 6	out of which: 3.5 course	2 8	out of which 3.6 seminar/laboratory/project	28
Time allotment					hours
Study assisted by manual, course support, bibliography and notes					60
Additional documentation in the library/ on specialised electronic platforms and in the field					50
Preparation of seminars/laboratories/ topics/reports, portfolios and essays					60
Tutorship					20
Examinations					14
Other activities.....					20
3.7 Total hours of individual study	224				
3.9 Total hours per semester	56				
3.10 Number of credits	6				

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4. Prerequisites (where appropriate)

4.1 curriculum	Botanical conditioning, plant physiology, inorganic and organic chemistry
4.2 competences	Knowing the components of the optical microscope, a foreign language, computer and internet use

5. Conditions (where appropriate)

5.1. related to course	Laptop, videoprojector
5.2. related to seminar/laboratory/ project	Laptop, video projector, microscope, boards, plants with symptoms of infection

6. Specific competences acquired

Professional competences	<p>C1.Elaboration of sustainable agricultural production technologies, organization and coordination of the production processes</p> <ul style="list-style-type: none"> • Diagnosis and management of problems related to the organization and management of agricultural farms <p>C1.1Description of the scientific, theoretical and practical foundations underlying the elaboration and implementation of the integrated crop protection program</p> <p>C1.2 Explaining the need to use different technological links, correlated with the environmental factors and the requirements of the cultivated plants; explaining and interpreting the interrelationships between the adopted agricultural production systems and the environment</p> <ul style="list-style-type: none"> • Ensure consultancy and extension services in agriculture • Ensure consultancy and extension services in agriculture
Transversal competences	<p>CT1.Elaboration and observance of a work program and accomplishment of its own attributions with professionalism and rigor</p> <p>CT2. Applying effective communication techniques in team-specific activities; assume a role within the team and observe the principles of division of labor</p>

7. Objectives of discipline (coming from the specific competences acquired)

7.1 General objective	The causes and effects of the plant pathogenesis process, their influence on the quantity and quality of production, the profitability of agricultural units
7.2 Specific objectives	Knowledge of the variety of microorganisms that can cause pathogenesis processes at the level of agricultural crops; methods and means of preventive and combating, sustainable, through the use of preventive and biochemical technological elements, of inorganic, organic and biological products; the conditions for their application in order to achieve free products of toxic residues; methods of prognosis and warning of

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	pathogen evolution; environmental protection measures in the case of specific works to protect field crops
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8. Contents*/

8.1 Course	Methods of teaching	No. of hours/Remarks
Plant diseases, definition of disease in phytopathology. Physiological, nutritional and infectious diseases	Free teaching, projection with video projector, Power Point presentations	2
The physiological and structural changes suffered by field plants as a result of disease processes	Free teaching, floor plans, projection with video projector, Power Point presentations Repetition of the terms, main themes presented at the previous course	2
Specific symptoms caused to plants grown following pathogenesis processes	Free teaching, floor plans, projection with video projector, Power Point presentations Repetition of the terms, main themes presented at the previous course	2
Classification of plant pathogens, viruses and viroids of field plants	Free teaching, floor plans, projection with video projector, Power Point presentations Repetition of the terms, main themes presented at the previous course	2
Classification of plant pathogens: bacteria and bacteria of field plants	Free teaching, floor plans, projection with video projector, Power Point presentations Repetition of the terms, main themes presented at the previous course	2
Classification of plant pathogens: mycoplasmas and mycoplasmas of field plants	Free teaching, floor plans, projection with video projector, Power Point presentations Repetition of the terms, main themes presented at the previous course	2
Classification of plant pathogens: pathogenic fungi and field mycosis	Free teaching, floor plans, projection with video projector, Power Point presentations Repetition of the terms, main themes presented at the previous course	2
Evolution of the pathogenesis process; the specific symptoms of pathogens at field plants;	Free teaching, floor plans, projection with video projector, Power Point presentations Repetition of the terms, main themes presented at the previous course	2
Methods and techniques of prevention, integrated and biological protection of field plant pathogens	Free teaching, floor plans, projection with video projector, Power Point presentations Repetition of the terms, main themes presented at the previous course	2
Biochemical and chemical products used in the prevention and control of plant pathogens; pesticide toxicity.	Free teaching, floor plans, projection with video projector, Power Point presentations Repetition of the terms, main themes presented at the previous course	2

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Integrated protection elements of field crop pathogens		
Establish the opportunity to apply prevention and combat measures	Free teaching, floor plans, projection with video projector, Power Point presentations Repetition of the terms, main themes presented at the previous course	2
Modern methods and apparatus for the application of treatments in field crops, control of the frequency and intensity of the pathogen attack	Free teaching, floor plans, projection with video projector, Power Point presentations Repetition of the terms, main themes presented at the previous course	2
Control of the efficacy of treatments applied to field crops	Free teaching, floor plans, projection with video projector, Power Point presentations Repetition of the terms, main themes presented at the previous course	2

Bibliography

- 1.PÂRVU M.,*Ghid practic de fitopatologie*, Ed. Presa Universitară Clujeană, 2000
- 2.CSEP N.: *Fitopatologie. Bolile plantelor cultivate*. Ed. II-a. Universitatea din Oradea. Editura Gee, București; p.217; ISBN.973-85232-3-0 (*curs universitar*); 2001
- 3.. Csep N., Csep A.: *Bolile plantelor cultivate și a produselor vegetale depozitate*, Ed.Universității din Oradea, 2003
- 4.CSEP N.: *Proгноza apariției bolilor principalelor plante de cultură*, Editura Universității din Oradea ; p.274. ISBN.973-613-571-3. 2004.
- 5.CSEP N: (coordonator),BARA V., BUCUREAN ELENA, CIOBANU CORNELIA: *Bolile, dăunătorii și buruienile principalelor plante cultivate Vol.3*. (Lucrare publicată în cadrul Proiectului PHARE-CBC RO2002 / 000.628.03-02 „Centre regionale de instruire fitosanitară”. Editura Universității din Oradea; ISBN 973-613-608-6; VOL 3.ISBN 973-613-611-6. Cap.1-6 pp.1-193; p.452. 2004.
6. CSEP N.:*Protecția eficientă și sigură a plantelor față de boli*. Editura Universității din Oradea, ISBN. 973-613-896-8; p.226.2005.
- 7.CSÉP N.,CSÉP A.: *Protecția plantelor față de boli*.Editura Universității din Oradea. ISBN. 978. 973. 759. 623.9. 279 p., 2008.
- 8.RADÓCZ L.,CSÉP N.(coordonatori și coautori): *Protecția integrată a plantelor, vol.II.Organismele dăunătoare culturilor de câmp și horticole*. Lucrare bilingvă elaborată în cadrul proiectului PHARE-CBC Ro.2006-018-446. 01. 01.22, cu titlul „Fitoclinică pentru educație și consultanță”. Ed.Universității din Oradea, ISBN. 978-973-759-872-1, 200 p.,2009.

8.2 Seminar	Methods of teaching	No. of hours/ Remarks
-	-	-
-	-	-
8.3 Laboratory		
Getting phytopathological microscopy. Laboratory technique	Presentation of laboratory equipment, working methods and labor protection measures during laboratory hours	2

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Important physiological and morphological changes produced by the main pathogens in field plants	Power point presentations, boards. Plants with symptoms of infection	2
Symptoms produced by field cropping viruses	Power point presentations, boards. Plants with symptoms of infection	2
Symptoms produced by mycoplasmas, field cultures bacteria	Power point presentations, boards. Plants with symptoms of infection	2
Symptoms produced by mushrooms and herbs at the level of field crops	Power point presentations, boards. Plants with symptoms of infection	2
Systems for the classification of phytopathogenic fungi	Power point presentations, boards. Plants with symptoms of infection	2
Diagnosis of diseases produced by different classes of fungi	Power point presentations, boards. Plants with symptoms of infection	2
Phytosanitary control: determining the severity of the attack, the suitability of the application and the effectiveness of the phytosanitary treatments	Power point presentations, boards. Plants with symptoms of infection	2
Toxicity of pesticides	Power point presentations, boards. Prospects for pesticides approved for use in field crops (visit to a pesticide storage or disposal unit)	2
Preservation, storage and handling of pesticides	Power point presentations, boards. Prospects for pesticides approved for use in field crops (visit to a pesticide storage or disposal unit)	2
Machines and apparatus for the application of terrestrial and aviation treatments at the level of field crops	Power point presentations, boards. Prospects for pesticides approved for use in field crops (visit to a pesticide storage or disposal unit)	2
Forecasting and warning methods applied for the correct application of plant protection measures	Apparatus and methodology used in the practice of plant protection	2
Harvesting and preserving the material for laboratory and herbarium analyzes	Presentation of methods of harvesting, herborizing and preparation of permanent preparations in conservation solutions	2
Verification of the aptitude to assess the pathogenesis process at plant level	Recapitulation of the activities carried out, practical verification of acquired knowledge	2

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8.4 Project	-	-
Bibliography 1. CSEP N., CSEP A.: <i>Lucrări practice de fitopatologie. Universitatea din Oradea, Facultatea de Protecția Mediului, Specializarea Agricultură - Horticultură</i> , Editura Universității din Oradea, 2001.pp.5-62 și 71-167; p.167 + 4 planșe color; 2001. 2. Csep N., Timofte A., 2006: <i>Album fitopatologic. Ed. Universității din Oradea</i> 3. CSEP M., RADÓCZ L., DÁVID I.: <i>Manipularea și utilizarea produselor de protecția plantelor. Cross-border cooperation Programme Magyarország-Romania, INTERREG III/A HU-RO 0602/105</i> , Editura: Magyar Növényvédő Mérnöki és Növényorvosi Kamara Hajdú-Bihar megyei Területi Szervezete, Debrecen, 206 p., 2008.		

* The content, respectively the number of hours allocated to each course / seminar / laboratory / project will be detailed during the 14 weeks of each semester of the academic year.

9. Corroboration of discipline content with the expectations of the epistemic community, professional associations and representative employers from the field corresponding to the study programme

<ul style="list-style-type: none"> The content of the course and of the laboratory work has been adapted based on the knowledge and skills necessary to be included in the specific activities requested by the potential employers, enterprises, economic actors, professional associations. Thematic elements are compatible and can be found in the curricula of the educational units similarly superior in the country and meet the requirements of institutions with coordination, guidance, research or agricultural production

10. Evaluation

Type of activity	10.1 Evaluation criteria	10.2 Evaluation methods	10.3 Share in the final grade
10.4 Course	Knowledge of the causes and effects of pathogenesis processes, the correlation of the host-pathogen-environment plant and the practical possibilities of preventing and combating the quantitative, qualitative and financial effects of plant disease processes	Oral exam, with an answer to at least 2 questions from the exam pass	
10.5 Seminar	-	-	-
10.6 Laboratory	Knowledge of specific equipment, recognition of the presence of the pathogenesis process	Oral, the practical use of the apparatus, the practical recognition of the symptoms of the disease	
10.7 Project	-	-	-
10.8 Minimum standard of performance			
Minimum performance standard: Independent use of phytosanitary equipment, phytosanitary forecasting equipment,			

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pesticide treatments. Elaboration of a phytosanitary action plan and its implementation. Knowledge of the main groups of pesticides and their toxicity, measures to prevent intoxication and to reduce their negative impact on the environment

Date of completion

Signature of course holder**

Signature of seminar
laboratory/project holder **

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Date of approval in the department

Signature of the Head of Department

.....

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** - Name, first name, academic degree and contact details (e-mail, web page, etc.) will be specified.

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