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 II						
2.2 Course holder	Stanciu Alina Ştefania						
2.3 Seminar/Laboratory/Project holder	Stanciu Alina Ştefania						
2.4 Year of study	II	2.5 Semester	IV	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	56	out of which: 3.5 course	28	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	**4**

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

6. Specific competences acquired	
Professional competences	Elaboration of sustainable agricultural production technologies, organization and coordination of the production processes • Elaboration of strategies for the implementation of Community Agricultural Policies at national level • Diagnosis and management of problems related to the organization and management of agricultural farms • Production of quality biological material for growing crops • Expertise of agricultural land, management and allocation of funds for agriculture • Ensure consultancy and extension services in agriculture
Transversal competences	Elaboration and observance of a work program and accomplishment of its own attributions with professionalism and rigor • Applying effective communication techniques in team-specific activities; assume a role within the team and observe the principles of division of labor • Objective self-evaluation of the need for continuous professional training in order to adapt and respond to the requirements of economic development; the use of information and communication techniques and, at least, an international language of circulation

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

7.1 General objective	♣ The causes and effects of plant pathogenesis processes, 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 non-chemical 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 pathogen evolution; environmental protection measures in the case of specific works to protect field crops.

8. Content*/

8.1 Course	Methods of teaching	No. of hours/Remarks
Diseases specific to the main field crops, specific pathogens, damage, evolutionary pathogen cycle, preventive and curative methods, methods and techniques of	Free teaching, projection with video projector, Power Point presentations	2

application of treatments to the main crops		
Disease of cereal grains (autumn wheat, barley, two-rowed barley) Corn diseases	Free teaching, floor plans, projection with video projector, Power Point presentations Repetition of the terms, main themes presented at the previous course	2
Sunflower diseases	Free teaching, floor plans, projection with video projector, Power Point presentations Repetition of the terms, main themes presented at the previous course	2
Diseases of beans, peas, soy	Free teaching, floor plans, projection with video projector, Power Point presentations Repetition of the terms, main themes presented at the previous course	2
Potato diseases	Free teaching, floor plans, projection with video projector, Power Point presentations Repetition of the terms, main themes presented at the previous course	2
Diseases of sugar beet and feed	Free teaching, floor plans, projection with video projector, Power Point presentations Repetition of the terms, main themes presented at the previous course	2
Diseases of fodder plants (alfalfa, clover)	Free teaching, floor plans, projection with video projector, Power Point presentations Repetition of the terms, main themes presented at the previous course	2
Diseases of field vegetables: tomatoes, peppers, cucumbers, roots	Free teaching, floor plans, projection with video projector, Power Point presentations Repetition of the terms, main themes presented at the previous course	2
Sprouts, salad, spinach	Free teaching, floor plans, projection with video projector, Power Point presentations Repetition of the terms, main themes presented at the previous course	2
Vegetable diseases in protected areas (greenhouses, solariums)	Free teaching, floor plans, projection with video projector, Power Point presentations Repetition of the terms, main themes presented at the previous course	2
Diseases of fruit trees	Free teaching, floor plans, projection with video	2

	projector, Power Point presentations Repetition of the terms, main themes presented at the previous course	
Diseases, grapevines, ornamental plants	Free teaching, floor plans, projection with video projector, Power Point presentations Repetition of the terms, main themes presented at the previous course	2
Prediction of pathogen evolution, warning of phytosanitary interventions.	Free teaching, floor plans, projection with video projector, Power Point presentations Repetition of the terms, main themes presented at the previous course	2
Internal and external phytosanitary quarantine	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.,G*hid practic de fitopatologie,* Ed. Presa Universitară Clujeană, 2000

2.CSEP N.: *Fitopatologie. Bolile plantelor cultivate*. Ed. II-a. Universitatea din Oradea. Editura Geea, Bucureşti; p.217; ISBN.973-85232-3-0 (*curs universitar);* 2001

3.. Csep N., Csep A.: Bolile plantelor cultivate şi a produselor vegetale depozitate, Ed.Universităţii din Oradea, 2003

4.CSEP N.: *Prognoza apariţiei bolilor principalelor plante de cultură*, Editura Universităţii din Oradea ; p.274. ISBN.973-613-571-3. 2004.

5.CSEP N: (coordonator),BARA V., BUCUREAN ELENA, CIOBANU CORNELIA: *Bolile, dăunătorii şi buruienile principalelor plante cultivate Vol.3.* (Lucrare publicată în cadrul Proiectului PHARE-CBC RO2002 / 000.628.03-02 „Centre regionale de instruire fitosanitară". Editura Universităţii 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.:*Protecţia eficientăşi sigură a plantelor faţă de boli.* Editura Universităţii din Oradea, ISBN. 973-613-896-8; p.226.2005.

7.CSÉP N.,CSÉP A.: Protecţia plantelor faţă de boli.Editura Universităţii din Oradea. ISBN. 978. 973. 759. 623.9. 279 p., 2008.

8.RADÓCZ L.,CSÉP N.(coordonatori şi coautori): *Protecţia integrată a plantelor, vol.II.Organismele dăunătoare culturilor de câmp şi horticole.* Lucrare bilingvă elaborată în cadrul proiectului PHARE-CBC Ro.2006-018-446. 01. 01.22, cu titlul „Fitoclinică pentru educaţie şi consultanţă". Ed.Universităţii din Oradea, ISBN. 978-973-759-872-1, 200 p.,2009.

8.2 Seminar	Methods of teaching	No. of hours/ Remarks
-	Lecture, Presentation PowerPoint	-
8.3 Laboratory		
Pathophysiology and pathogen microscopy:	Lecture, practical applications, use of the	2

- Cereal grains (wheat, barley, two-rowed barley, rye, oats)	determinant for the identification of the studied plant diseases	
- Corn and sorghum	Lecture, practical applications, use of the determinant for the identification of the studied plant diseases	2
Pathophysiology and pathogen microscopy: – beans (peas, beans, soybeans, chickpeas)	Lecture, practical applications, use of the determinant for the identification of the studied plant diseases	2
Industrial plants (flax, hemp, flower) sun)	Lecture, practical applications, use of the determinant for the identification of the studied plant diseases	2
Potato and sugar beet	Lecture, practical applications, use of the determinant for the identification of the studied plant diseases	2
Field vegetables (tomatoes, peppers, eggplants)	Lecture, practical applications, use of the determinant for the identification of the studied plant diseases	2
Field vegetables (cabbage, bulbous, cucurbitaceae, umbelliferae)	Lecture, practical applications, use of the determinant for the identification of the studied plant diseases	2
Vegetables grown in protected areas: solariums, greenhouses, seedlings	Lecture, practical applications, use of the determinant for the identification of the studied plant diseases	2
Fruit trees: apple, hair, quince	Lecture, practical applications, use of the determinant for the identification of the studied plant diseases	2
Fruit trees: plum, apricot, peach	Lecture, practical applications, use of the determinant for the identification of the studied plant diseases	2
Almond, cherry, cherry, walnut	Lecture, practical applications, use of the determinant for the identification of the studied plant diseases	2
Grape vine (grapes for table and wine)	Lecture, practical applications, use of the determinant for the identification of the studied plant diseases	2
Ornamental plants - stored vegetable products	Lecture, practical applications, use of the determinant for the identification of the studied plant diseases	2
Verification of practical skills in the diagnosis of plant diseases	Lecture, practical applications, use of the determinant for the identification of the studied plant diseases	2
8.4 Project		

Bibliography

1. CSEP N., CSEP A.*: Lucrări practice de fitopatologie. Universitatea din Oradea, Facultatea de Protecţia Mediului, Specializarea Agricultură - Horticultură,* Editura Universităţii din Oradea, 2001.pp.5-62 şi 71-167; p.167 + 4 planşe color; 2001.

2.Csep N.,Timofte A., 2006: Album fitopatologic. Ed. Universităţii din Oradea

3.CSEP M., RADÓCZ L., DÁVID I.*: Manipularea şi utilizarea produselor de protecţia plantelor***.** Cross-border cooperation Programme Magyarország-Romania, INTERREG III/A HU-RO 0602/105, 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

- 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	70%
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	30%
10.7 Project	-	-	-
10.8 Minimum standard of performance			
Minimum performance standard: Independent use of phytosanitary equipment, phytosanitary forecasting equipment, 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 **
.....	Lect.Phd.eng.Stanciu Alina Ştefania astanciu@uoradea.ro	Lect.Phd.eng.Stanciu Alina Ştefania

Date of approval in the department

.....

Signature of the Head of Department

Prof.Phd.eng. CHEREJI Ioan
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Dean signature

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