

## **Plant pathology (IIIrd Year of study, Vth and VIth SEMESTER)**

**Credit value (ECTS) Sem. I=5, Sem. II=4**

### **Course category**

**Compulsory courses**

### **Course holder:**

**PhD, Prof. Eugen ULEA**

### **Discipline objectives (course and practical works)**

The analytical program aims to instill the knowledge by students concerning etiology, symptomatology, the epidemiology and measures for prevention and control of plant disease. Practical application aims to familiarize students with the technical work in the laboratories of plant protection, and with the recognition of disease.

### **Contents (syllabus)**

| <b>Course (chapters/subchapters)</b>   |
|--|
| <b>Semester V</b>  |
| Phytopathology as a science.   |
| General notions about plant diseases   |
| Infectious phytopathogenic agents overview   |
| Phytopathogenic agents   |
| Infectious diseases pathogenesis   |
| Epidemiology of parasitic diseases   |
| Preventing and combating plant diseases  |
| Measures to prevent the intoxications and pollution in plant protection  |
| <b>Semester V</b>  |
| Cereal diseases  |
| Peas and beans diseases  |
| Diseases of root and tuber crops   |
| Oily plant diseases  |
| Fodder plant diseases  |
| Diseases Non-food crops  |
| Diseases of medicinal and aromatic plants  |
| Tree diseases  |
| <b>Practicum</b>   |
| <b>Semester V</b>  |
| Parasitic aspects- anatomical and morphological changes produced by viruses, mycoplasma, bacteria and pathogenic fungi |
| Phytopathological material harvest   |
| Micromycetes morphology  |
| Vegetative reproduction and asexual reproduction of micromycetes   |
| Sexual reproduction: oospore, zygospore, ascus.  |
| Sexual reproduction: basidium  |
| Prevention and control of diseases caused by pathogens in plants   |
| Peas and beans diseases  |

|   |
|---|
| Potato diseases: viruses and bacteriosis  |
| Potato diseases: mycosis  |
| Sugar -beet diseases  |
| Fodder plant diseases   |
| Summary Seminar -Colloquium   |
| <b>Semester VI</b>  |
| Wheat diseases: powdery mildew, canker, <i>Fusarium</i> root, septoriosi, smut and rust |
| Barley diseases   |
| Oat diseases  |
| Corn diseases   |
| Sunflower diseases  |
| Apple, pear and quince trees diseases   |
| Plum diseases   |
| Cherry, apricot and peach diseases  |
| Grapevine diseases  |
| Vegetables diseases: tomato, pepper, cucumber, onion                                    |
| Summary Seminar -Colloquium   |

## References

1. Baicu, T. și colab.: Sisteme de combatere integrată a bolilor și dăunătorilor pe culturi. Ed. CERES, București, 1986.
2. Baicu, T.: Îndrumător pentru folosirea pesticidelor. Ed. CERES, București, 1979.
3. Bontea Vera : Ciuperci parazite și saprofite din România, Edit. Academiei Republicii Socialiste România, București, Vol. I, 1985.
4. Docea, E. și colab.: Ghid pentru recunoașterea și combaterea bolilor plantelor agricole. Vol. I și II, Ed. CERES, București, 1990 și 1991.
5. Dumitraș Lucreția, Seșan Tatiana: Bolile plantelor industriale - prevenire și combatere. Ed. CERES, București, 1988.
6. Hatman, M. și colab.: Fitopatologie. E.D.P. București, 1989.
7. Hatman, M. și colab.: Protecția plantelor. Ed. CERES, București, 1986.
8. Henegar Monica, Andru Monica, Codexul produselor de protecție a plantelor omologate pentru utilizare în România, Ed. Andagra, Arad, 2013.
9. Hulea, Ana și colab.: Bolile și dăunătorii cerealelor. Ed. CERES, 1975.
10. Iacob Viorica: Bolile plantelor cultivate-prevenire și combatere, Ed. "Ion Ionescu de la Brad", Iași, 2008.
11. Janse J.D.: Phytobacteriology –Principles and practice ,Ed. CABI Publishing, USA, 2009.
12. Parry D.: Plant pathology in agriculture, Cambridge University Press, New York, 1990 .
13. Pop I.V.:Tratat de virologie vegetală II, Virusurile culturilor de câmp, Edit. Printech, București, 2009
14. Rădulescu E., Rafailă C.: Tratat de fitopatologie agricolă vol. I-IV, Ed. Academiei Prepublicii Socialiste România, București 1970.
15. Șandru I.D.: Protejarea culturilor agricole cu ajutorul pesticidelor, Ed. Helicon, Timișoara, 1996.
16. Severin V., Kupferberg Simona, Zurini I.: Bacteriozele plantelor cultivate, Edit. Ceres, București, 1985 .
17. Ulea, E.: Fitopatologie. Ed. Ion Ionescu de la Brad, Iași, 2003.

## Evaluation

| Evaluation form                                  | Evaluation Methods                     | Percentage of the final grade |
|--|--|-------------------------------|
| Exam   | Oral examination                       | 60%                           |
| Appreciation of the activity during the semester | Test+ practical application+ herbarium | 40%                           |

## Contact

**PhD, Prof. Eugen ULEA**

Faculty of Agriculture - IULS Iași

3, Mihail Sadoveanu Alley, Iași, 700490, Romania

telefon: 0040 232 407426, fax: 0040 232 219175

E-mail: [eulea@uaiasi.ro](mailto:eulea@uaiasi.ro)