

## Plant protection (1) - Entomology (IInd Year of study, IIIrd SEMESTER)

Credit value (ECTS) 4

### Course category

Domain (Imposed)

### Course holder:

Assist. Prof. Dr. Nela TĂLMACIU

### Discipline objectives (course and practical works)

The course aims at formation base necessary fundamental knowledge and understanding of working with concepts specific to the field of entomology at the same time discipline aims to identify students with the main morphological and anatomy characters of insects, biology, ecology and controlling principal pests of agricultural plants.

Practical works seek to familiarize students with the technical identification of the main pests in orchards, of vines, vegetable crops, industrial crops and cereals and knowledge of general notions regarding the main methods of prevention and pest control; knowledge of the types of pesticide, knowing core group of pesticides used in the pest during the growing season and the main pest control schemes.

### Contents (syllabus)

Course (chapters/subchapters)
<b>The object of study, the history and the importance of microbiology.</b>
<b>General characteristics of insects:</b> morphology and anatomy of insects.
<b>Insect Biology:</b> Reproduction in insects; Insect development; Generations and evolutionary cycle; Diapause.
<b>Insect Ecology:</b> Factors influencing the development of insects;
<b>Detection and prognosis of pests:</b> pest detection methods; methods of prognosis.
<b>Methods used in pest control:</b> preventive methods; curative measures.
<b>Insect pests of cereal crops:</b> dispersion, description, biology, ecology, plants attacked and method of pest prevention measures and control.
<b>Insect forage plants:</b> dispersion, description, biology, ecology, plants attacked and method of pest prevention measures and control.
<b>Insect pests in annual leguminous plants:</b> dispersion, description, biology, ecology, plants attacked and method of pest prevention measures and control.
<b>Insect pests on technical plants:</b> dispersion, description, biology, ecology, plants attacked and method of pest prevention measures and control.
<b>Insect pests on vegetable plants in greenhouses:</b> dispersion, description, biology, ecology, plants attacked and method of pest prevention measures and control.
<b>Insect pests of vine plantations:</b> dispersion, description, biology, ecology, plants attacked and method of pest prevention measures and control.

Practical works
<b>The morphology of the insect body:</b> structure of the head, chest, abdomen and their appendices.

<b>Insect development.</b> Larvae and pupae types
<b>Key dichotomy</b> to determine the main orders of insects.
<b>Types of pest.</b> Chemical control of pests.
<b>Recognition of main pests</b> in grain, meadows, pastures and natural meadows.
<b>Recognition of main pests</b> of legumes, technical plants and vegetable crops.
<b>Recognition of main pests</b> in fruit tree plantations, fruit trees and of vines plantations.

### **Bibliography**

1. Filipescu C., Georgescu T., Tălmăciu M., 1989 - Lucrări practice de Entomologie. Partea generală. Uz intern, Iași.
2. Ghizdavu I., Pașol P., Pălăgeșiu I., Bobîrnac B., Filipescu C., Matei Iulia, Georgescu T., Baicu T., Bărbulescu Al., 1997 -Entomologie agricolă. Editura Didactică și Pedgogică R.A., București.
3. Bărbulescu Al., 1997 - Entomologie agricolă. Editura Didactică și Pedgogică R.A., București.
4. Perju T., 1995 - Entomologie agricolă, componentă a protecției integrate a agrosistemelor. Editura Ceres, București.
5. Tălmăciu M., Georgescu T., Badeanu Marinela, 1998 - Entomologie. Partea specială. Uz intern, Iași
6. Tălmăciu M., 2003 – Protecția plantelor – Entomologie. Editura "Ion Ionescu de la Brad" Iasi.
7. Tălmăciu M., 2005 – Entomologie agricolă. "Ion Ionescu de la Brad" Iasi.
8. Roșca I., Oltean I., Mitrea I., Talmăciu M., Petanec D., Bunescu H., Istrate Rada, Talmăciu Nela, Stan C., Micu Lavinia, 2011 –Tratat de entomologie generală și specială Editura Alpha MDN, Buzău.

### **Evaluation**

<b>Evaluation form</b>	<b>Evaluation Methods</b>	<b>Percentage of the final grade</b>
Exam	Written examination	70%
Appreciation of the activity during the semester	Oral assessment during the semester, verification tests and final laboratory colloquium.	30%

### **Contact**

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# PLANT PROTECTION (IIInd Year of study, IVth SEMESTER)

**Credit value (ECTS) 4**

**Course category**

Domain (Imposed)

**Course holder:**

**Prof univ. dr. ULEA Eugen**

**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>
General notions about plant diseases
Introduction to plant diseases. Characteristics of pathogens.
Factors that influence parasitic properties (internal and external). Mode of nutrition and spread of the pathogens.
Clasification and specific characters of pathogen agents. Viruses. Mycoplasmas. Bacteria.
Fungi (morphology, asexual and sexual propagation, class characterization of fungi).
General technologies for prevention and integrated control.
Cereal diseases - I
Cereal diseases - II
Beans and peas disease.
Non-food crops diseases.
Vegetables diseases.
Fruit trees and shrubs diseases – I.
Fruit trees and shrubs diseases - II.
Grapevine diseases- I
Grapevine diseases – II.
<b>Practicum</b>
Parasitic aspects produces by pathogen agents
Cereal diseases
Non-food crops diseases
Beans and peas disease.
Vegetables diseases
Fruit trees diseases
Grapevine diseases

## References

1. Baicu T.: Îndrumător pentru folosirea pesticidelor, Ed. CERES, București, 1979.
2. Hatman M. și colab.: Protecția plantelor. Ed. CERES, București, 1986.
3. Henegar Monica, Andru Monica, Codexul produselor de protecție a plantelor omologate pentru utilizare în România, Ed. Andagra, Arad, 2013
4. Iacob Viorica: Bolile plantelor cultivate-prevenire și combatere, Ed. ”Ion Ionescu de la Brad”, Iași, 2008
5. Rădulescu E., Rafailă C.: Tratat de fitopatologie agricolă, vol. II, Ed. Academiei Prepublicii Socialiste România, București 1970
6. Șandru I.D.: Protejarea culturilor agricole cu ajutorul pesticidelor, Ed. Helicon, Timișoara, 1996
7. Săvescu A., Rafailă C.: Prognoza în protecția plantelor, Ed. Ceres, București, 1978
8. Ulea E.: Protecția plantelor - 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

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