



Course Unit: 900324 – Plant Protection II

Year 2 Semester 2 ISCED Code: 811 ECTS: 4

Type of Course Unit: Compulsory Delivery Mode: Face-to-face Language of Instruction: Portuguese

COURSE COORDINATOR: Maria Margarida F. Ribeiro Pereira

HOURS OF WORK

TOTAL HOURS	Contact Hours								Hours in autonomous work
	Theory	Theory and practice	Practical and laboratory work	Field work	Seminar	Internship	Tutorial guidance	Other	
100		60							40

Prerequisites (if applicable): Not applicable

LEARNING OUTCOMES (knowledge, skills and competence)

To succeed in this course, the student is enabling to demonstrate that:

- Communicate, exchange information and dialogue with experts and non-experts in the matter in question
- Apply the components of integrated pest control in concrete situations
- Identify and implement the most appropriate means of struggle for the prevention and combating harmful organisms
- Recognize the advantages and disadvantages resulting from the application of direct and indirect measures against harmful organisms.

CONTENTS

Risk estimate, economic outbreak and choice of protection control. Study of plant crop protection (vegetable crops -tomatoes, pimento, onion, garlic, carrot and fruit orchards like pear, walnut, almond and pomegranate), taking into account the current principles of plant protection under the requirements of trade and environmental protection.

For each culture are considered the following: main pests and diseases in the country, taxonomy, morphology, bioecology, symptoms, injuries, risk estimation, natural enemies, resistant varieties, prophylactic measures and chemical control, biological, cultural and biotechnical control.

DEMONSTRATION OF THE CONTENTS COHERENCE WITH THE COURSE UNIT'S LEARNING OUTCOMES

The study of plant protection of different cultures will allow the student to communicate, interchange information and dialogue with experts and non-experts on the subject in question. Knowledge of risk assessment techniques and the economic threshold will allow students to know when to act applying the components of integrated protection in concrete situations. Knowledge of alternative methods of control to chemical control tools enable the selection of the most appropriate means for preventing and combating the crop enemies allowing to recognize the advantages and disadvantages resulting from the application of the direct and indirect measures of control.

TEACHING METHODOLOGIES

Lectures, execution of practical work, online literature research practices. Final writing individual exam and / or developing an integrated protection strategy for a culture selected by the student and approved by the responsible teacher.

DEMONSTRATION OF THE COHERENCE BETWEEN THE TEACHING METHODOLOGIES AND THE LEARNING OUTCOMES

The development of the classes thought harmonizing the teaching methodologies with the fundamental objectives of the course

(UC). This will be an UC where students will learn not only why, but also how to perform and evaluate.

The provision of information and scientific knowledge and provided technical objectives will be developed in the theoretical and practical lessons, establishing the relationship with other materials already addressed in previous classes or other UC's.

Based on the knowledge that is being acquired, the observation of symptoms in plants and the use of different risk estimation techniques allow the decision-making in the timely implementation of the various means of control available, similar to what is true in any farm.

It will try to stimulate a dialogue in which all participate, through their own experience and knowledge. So share will be knowledge, doubts and questions, in order to benefit student learning and to cause greater motivation thereof.

Search will be essentially ensuring capacity building to apply the acquired knowledge.

Practical work required group of students will have an important contribution to the achievement of the objectives defined for UC, providing the possibility of electing a culture, study the main enemies of culture and elect all available means to control those who will be most recommended from the point of view of an integrated protection strategy.

The conclusion of the practical work will still have the advantage of knowledge sharing between the group members, looking for external information and thus contact with reality.

The evaluation of students will also serve to measure the effectiveness of teaching methods developed in the pursuit of goals that can be made some corrections in these methodologies, if deemed necessary.

EVALUATION METHODS

MAIN BIBLIOGRAPHY

DENT, D. (1995). Integrated Pest management. Chapman & Hall, London.

LOPES, A. (2000). Protecção Integrada de hortícolas. Direcção-Geral de Protecção das Culturas, Oeiras.

PEDIGO, L. P., 2002. Entomology and Pest Management. Prentice Hall (3rd ed), 679pp.

Planes, S. & Carrero, J. M. 1989. Plagas del campo. Ediciones Mundi-Prensa, Madrid, 398pp.

PEREIRA, M. M 2013 Protecção Integrada das culturas – Parte I -Videira. ESA/IPBeja, 81p.

REBOULET. J. 1999. Les Auxiliares entomophages. ACTA, Paris, 136 pp.

RICHARDS, O. W., & DAVIES, R. G. 1984. Tratado de entomologia Imms - Clasificación y Biología, Barcelona

SOUTHWOOD, T. & HENDERSON, P. 2000. Ecological Methods. Blackwell Science. 575pp.

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