

Description of the education module/course (syllabus)

Course name:	Integrated pest management	ECTS	1,0
Translation of the course name into English:	-		
Study field:	General Horticulture		

Language of lectures:	English	Study level:	Master of science
Study form:	<input checked="" type="checkbox"/> stationary <input type="checkbox"/> extramural	Status of lectures:	<input type="checkbox"/> primary <input type="checkbox"/> obligatory <input checked="" type="checkbox"/> directional <input checked="" type="checkbox"/> facultative
Academic year from which the description applies		Semester number: 2	<input checked="" type="checkbox"/> winter semester <input type="checkbox"/> spring semester
		2021/2022	Catalog number: OGR-O2-S-2216.28 ang

Course coordinator:	Prof. Mariusz Lewandowski		
Lecturers:	Prof. Mariusz Lewandowski		
Unit running the course:	Department of Applied Entomology, Faculty of Horticulture, Biotechnology and Landscape Architecture		
Unit ordering the course:	Faculty of Horticulture		
Assumptions, objectives and description of the course:	<p>The range of issues raised during the course are intended to expand and enrich the knowledge gained in the primary course of "Applied Entomology". After completing the course, students will be able to carry out field observations and properly scout for crop pests, identify risks from pests and choose best methods to eliminate them.</p> <p>The lectures will focus on the pest management that relies on a combination of effective and environmentally friendly practices. This course will cover the fundamental information on the pest biology and their interactions with the crops as well as methods for pest monitoring and non-chemical and chemical control in particular types of crops. The impact of pesticide used on the environment and beneficial organisms will be also discussed. Students will expand their knowledge on pests identification and damages which they cause. They will learn how to plan and carry out control treatments based on the principles of integrated production of horticultural crops.</p> <p>Course objectives: Possibility of using certain non-chemical and chemical methods of plant protection in pest management, legislation analysis and registration of plant protection products, review and diagnosis of the most important pests of horticultural crops, signaling methods and forecasting in pests management; selection of methods in integrated pest control; selection of insecticides for IPM; principles of Good Agricultural Practices (GAP); overview, analysis and discussion on problems of pest occurrence in horticultural crops and methodologies of IPM.</p>		
Didactic forms, number of hours:	Lectures; number of hours 15		
Teaching methods:	Lecture, multimedia presentation, discussion		
Formal requirements and prerequisites:	Basic information on pests in horticulture crops and methods of plant protection		
Learning outcomes:	<p>Knowledge:</p> <p>W_01 - knows and understands the assumptions of the integrated method of plant protection</p> <p>W_02 - knows the biology of the most important pests of agricultural plants and their natural enemies and understands the interactions between these organisms</p> <p>W_03 - knows methods of pests control in agricultural crops and understands the need for their combined application</p>	<p>Skills:</p> <p>U_01 – can carry out pests monitoring, recognize pests and beneficial organisms found in horticulture crops</p> <p>U_02 - can choose the methods of protection depending on the structure of harmful organisms</p>	<p>Competences:</p> <p>K_K01 - is ready to design protection of agricultural crops in an integrated system</p>
The way of verification of learning outcomes :	Effects all – Short-exams		
Form of documentation of achieved learning outcomes :	Short-exams protocol		
Elements and weights affecting the final grade:	Short-exams protocol 100%		
Place of classes:	Department's classrooms		
Basic and supplementary literature :	<ol style="list-style-type: none"> Abrol D.P. 2014. Integrated Pest Management. Current Concepts and Ecological Perspective. Elsevier Inc. 561pp. Paskin R., Dhawan A.K.. 2009.Integrated pest management: Innovation-Development Process. Springer Krebs J. C. 2009. Ecology. Benjamin Cummings, Hagler J.R., 2000 Biological control. In: Rechcigl J.E., Rechcigl N.A. 2000. Insect pest management. Techniques for environmental protection. Lewis Publ. Boca Raton, London, New York, pp. 207-241. Gerson U., Smiley R.L., Ochoa R. 2003. Mites (Acari) for Pests Control. Blackwell Science Ltd, Oxford, UK. Hoy M.A., Herzog D.C. 1985. Biological Control in Agricultural IPM ystems. Academic Press, INC. 		
COMMENTS			

Quantitative indicators characterizing the module / object:

Estimated total number of student work hours (contact and own work) necessary to achieve the assumed learning outcomes - on this basis, complete the ECTS field:	30 h
The total number of ECTS points that a student receives in classes requiring direct participation of academic teachers or other lecturers:	0,5 ECTS

Table of compliance of the directional learning outcomes with the effects of the course:

Effect category	Learning outcomes for the course:	Reference to learning outcomes specific for study program on particular study field (direction)	The impact of course on the directional effect *)
Knowledge – W_01	knows and understands the assumptions of the integrated method of plant protection	K_W03; K_W04; K_W09	2; 1; 1
Knowledge – W_02	knows the biology of the most important pests of agricultural plants and their natural enemies and understands the interactions between these organisms	K_W03; K_W07	2; 2
Knowledge - W_02	knows methods of pests control in agricultural crops and understands the need for their combined application	K_W04; K_W06	2; 2
Skills - U_01	can carry out pests monitoring, recognize pests and beneficial organisms found in horticulture crops	K_U03; K_U06	2; 1
Skills - U_01	can choose the methods of protection depending on the structure of harmful organisms	K_U04; K_U05	2; 1
Competences - K_01	is ready to design protection of agricultural crops in an integrated system	K_K01; K_K04	2; 1

*)

3 – znaczący i szczegółowy,

2 – częściowy,

1 – podstawowy,