

<b>1. Title of subject/module/unit</b>		<b>Integrated Protection of Horticultural Crops</b>				
<b>2. Unit code</b>		<b>3. Number of ECTS credits</b>			7	
<b>4. Contact hours</b>		<b>Total</b>	<b>L</b>	<b>E</b>	<b>S</b>	<b>Other forms</b>
		56	24	24	8	
<b>5. Cycle</b>	Master's	<b>6. Year</b>	1 <sup>st</sup>		<b>7. Semester</b>	1 <sup>st</sup>
<b>8. Study programme</b>		<b>International Master of Science in Horticulture</b>		<b>9. Branch of study</b>		
<b>10. Pillar of the programme</b>		Compulsory		<b>11. Language</b>	English	
<b>12. Special features</b>						
<b>13. Objectives and subject-specific competences</b>		<p>Identification of the most important diseases and insects agents occurring in horticulture crop plants (vegetables, orchards). Introduction of vegetable and orchard programmes for integrated plant protection (IPM systems).</p> <p>Principles of using chemical protection in IPM.</p>				
<b>14. Description of content</b>		Getting to know with the occurrence, harmfulness and economically important pests and diseases in integrated production systems and discusses how prevent and control them.				
<b>15. Basic bibliography</b>		<p>Agrios G. N.: Plant Pathology. Academic Press. San Diego, London, Boston, N. York, Sydney. Tokyo, Toronto 1997, ss. 635.</p> <p>Snowdon A. L.: Post-Harvest Diseases and Disorders of Fruits and Vegetables. Vol. 1: General Introduction and Fruits. Wolfe Scientific Ltd. London 1990, ss. 302.</p> <p>Vol. 2: Vegetables. Wolfe Scientific Ltd. London 1990, ss. 416.</p> <p>Learning Plant Pathology. The Plant Health Instructor. American Phytopathological Society, 2006. <a href="http://www.apsnet.org/education">www.apsnet.org/education</a>.</p> <p>Peshin, Rajinder; Dhawan, Ashok K. (Eds.). <b>Integrated Pest Management</b>. Volume 1. 2009</p> <p>D.P. Abrol., U. Shankar. <b>Integrated Pest Management: Principles and Practice</b>. CABI, 2012 - Electronic books – 512 pp.</p>				

<b>16. Envisaged learning outcomes</b>	<i>16.1 Knowledge and understanding</i>	Examines methods and techniques of plant protection, has knowledge in the selection of the appropriate pesticides. It has the ability to associate elements of biology and the development of pests and pathogens to the proper selection of monitoring methods and the selection of the most favorable techniques for the prevention and control of pests and pathogens from the point of view of integrated pest.
	<i>16.2 Application</i>	Draws up a programs to protect fruit and vegetable crops from diseases and pests. Identifies pathogens and pests, the symptoms of disease and injury and beneficial organisms present in the fruit and vegetable crops. Knows how to properly use the right equipment used for forecasting and monitoring of pathogens (signaling plots) and pests (pheromone, sticky and volatile traps).
	<i>16.3 Reflection</i>	The student is capable of formulating opinions on the use of integrated pest management in crop improvement.
	<i>16.4 Transferable skills – not tied to just one subject</i>	Teamwork, ability to present and defend personal opinions.
<b>17. Methods of teaching and learning</b>	Lectures, laboratory practicals, field practicals	
<b>18. Conditions for inclusion or to undertake work required</b>	Enrolment in the year of the course. Pre-requisite is a basic course in biology of insect and bacteria and fungi science. Basic computer skills.	
<b>19. Methods of assessment and the assessment scale</b>	<ul style="list-style-type: none"> <li>- Oral presentation (40%)</li> <li>- Attendance at laboratory practicals and preparation of laboratory (40%)</li> <li>- Reports (20%)</li> </ul> Evaluation scale: Grades from 2.0 (worst) to 5.0 (best)	
<b>20. Method of evaluation of course quality</b>	Student questionnaire.	
<b>21. Curriculum compiler</b>	Dr hab. Jacek Nawrocki, University of Agriculture in Krakow Dr. Maria Pobożniak, University of Agriculture in Krakow	