

Description of the education module/course (syllabus)

Course name:	<b>Applied of Plant Pathology</b>	<b>ECTS</b>	<b>2</b>
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 checked="" type="checkbox"/> directional <input type="checkbox"/> obligatory <input checked="" type="checkbox"/> facultative
		Semester number:	1 <input type="checkbox"/> winter semester <input checked="" type="checkbox"/> spring semester
Academic year from which the description applies		<b>2021/2022</b>	Catalog number: <b>OGR-O2-S-1L07.29 ang</b>

Course coordinator:	Prof. Marek S. Szyndel		
Lecturers:	Faculty staff and/or PhD students of Department of Plant Pathology		
Unit running the course:	Department of Plant Pathology		
Unit ordering the course:	Faculty of Horticulture		
Assumptions, objectives and description of the course:	Introducing students to the extent of factors responsible for plant diseases and losses caused by them. Characteristics different groups of plant pathogens: etiology and symptomatology. Control and management of plant diseases. Mycological diagnostics of mycotoxic fungi: <i>Aspergillus</i> , <i>Penicillium</i> , <i>Fusarium</i> .		
Didactic forms, number of hours:	a) Lectures.....; number of hours 15; b) Laboratory classes.....; number of hours 15;		
Teaching methods:	Lectures with multimedia presentations, laboratory exercises with fungi-herbarium and microscopic observations of hyphal and fruiting structures and bodies.		
Formal requirements and prerequisites:	General plant pathology, botany, microbiology, plant physiology, biochemistry Student has a basic knowledge of biology and physiology of microorganisms		
Learning outcomes:	<p>Knowledge</p> <p>W_01 – knowledge of integrated methods of plant protection to a degree that allows to develop guidelines for combating the pathogen in accordance with the occupational health and safety regulations</p> <p>W_02 - knowledge of the potential threats posed by the occurrence of some inflectional diseases</p>	<p>Skills</p> <p>U_01 – the ability to diagnose plant diseases on the basis of symptoms and etiological signs</p> <p>U_02 – the ability to apply the knowledge of etiology and epidemiology to select a method of plant disease prevention</p>	<p>Competences</p> <p>K_01 – readiness to identify cases of failure to comply with the proper rules of plant protection</p>
The way of verification of learning outcomes :	Effect W_02,U_01,K_01 marks from the tests Effect W_01,U_02, K_01 mark from the written exam		
Form of documentation of achieved learning outcomes :	The periodic written tests during laboratory class and written final exam		
Elements and weights affecting the final grade:	The evaluation consist: the evaluation of the laboratory tests - 50%, the written exam – 50 %.		
Place of classes:	Lecture room and laboratories equipped with multimedia During laboratory class students use fresh and herbarian plant material with disease symptoms, and make microscopical examination pathogens structures (etiological signs). Labs are equipped with stereomicroscopes and light microscopes on all tables. .		
Basic and supplementary literature :	<p>Basic literature:</p> <p>Agrios G.N. 2005. Plant Pathology, Fifth ed. Elsevier Academic Press, Burlington, MA. 922 pp</p> <p>Bos L., 1999. Plant viruses, unique and intriguing pathogens. A textbook of plant virology. Backhuys Publishers, Leiden,</p> <p>Campbell R. 1989. Biological control of microbial plant pathogens. Cambridge Univ. Press.</p> <p>Durate Diaz. 2005. The mycotoxin blue book. Nottingham University Press.</p> <p>Janse J.D. 2005. Phyto bacteriology: principles and practice. CABI Publishing</p> <p>Jeffries P., Young T. W. K. 1994. Interfungal parasitic relationships. CAB International, Wallingford, UK</p> <p>Mukerji K. G., Garg K. L. 1988. Biocontrol of plant diseases. CRC Press. vol.1-2</p> <p>L.M. Smith, J. Dunez, R.A. Lelliott, D.H. Phillips and S.A. Archer (eds.): European handbook of plant diseases. Blackwell Scientific Publications, Oxford 1988</p> <p>Trigiano R.N., Windham M.T., Windham A.S. (eds.) 2004. Plant Pathology. Concepts and Laboratory Exercises. CRS Press Boca Raton</p>		
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:	<b>51. h</b>
The total number of ECTS points that a student receives in classes requiring direct participation of academic teachers or other lecturers:	<b>1 ECTS</b>

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	knowledge of integrated methods of plant protection to a degree that allows to develop guidelines for combating the pathogen in accordance with the occupational health and safety regulations	K_W04	2
Knowledge –W_02	knowledge of the potential threats posed by the occurrence of some inflectional diseases	K_W09	2
Skills – U_01	the ability to diagnose plant diseases on the basis of symptoms and etiological signs	K_U04	2
Skills –U_02	the ability to apply the knowledge of etiology and epidemiology to select a method of plant disease prevention	K_U06	2
Competences – K_01	readiness to identify cases of failure to comply with the proper rules of plant protection	K_K04	2

\*)

3 – znaczący i szczegółowy,

2 – częściowy,

1 – podstawowy,