

## Description of the education module/course (syllabus)

Course name:	<b>Physiological basics of vegetable and medicinal plants production</b>			<b>ECTS</b>	<b>3</b>
Translation of the course name into English:	-				
Study field:	General Horticulture				
Language of lectures:			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: 3	<input type="checkbox"/> winter semester <input checked="" type="checkbox"/> Xspring semester	
Academic year from which the description applies			<b>2021/2022</b>	Catalog number:	<b>OGR-O2-S-3L18.20 ang</b>
Course coordinator:	Dr Olga Kosakowska				
Lecturers:	Dr Olga Kosakowska				
Unit running the course:	Department of Vegetables and Medicinal Plants				
Unit ordering the course:	Faculty of Horticulture				
Assumptions, objectives and description of the course:	<p>The purpose of the subject is to provide students with the basic mechanisms of life processes of plants growth, responsible for productivity and yield both in the field and under cover covers. Indication of the potential impact of external and internal factors in the regulation of physiological processes in vegetable and medicinal plants.</p> <p>Lectures. Physiology of plants yielding as an interdisciplinary science. Methods used in modern physiology of plants. Growth-ratio analysis. Photosynthesis, productivity, yielding. Transport of assimilates. Distribution patterns. Impact of external and internal factors on plants yielding. Biotic and abiotic stresses.</p> <p>Practice: Determination of relationship between biological and horticultural (economic) yield. Practical application of growth-ratio analysis. Quality evaluation of selected vegetable plants. Determination of the effect of external factors (e.g. temperature, light) on the growth and productivity of vegetable and medicinal crops. Determination of the phenolic compounds content (as stress indicator) in plants raw material cultivated in different conditions. Issues related to the achievement of plant physiology in assessing the productivity of different varieties of vegetables and herbs.</p>				
Didactic forms, number of hours:	Lectures 15h Practice 15 h				
Teaching methods:	Presentation, discussion, solving a problem, experiment				
Formal requirements and prerequisites:	Botany, Plant physiology				
Learning outcomes:	<p>Knowledge:</p> <p>W 01 - knows mechanisms of regulation and control of plant life processes affecting the economic yield, W 02 - understands of the possibility of adapting the cultivation in the field and under covers in order to optimize yield,</p>	<p>Skills:</p> <p>U 01 - is able to plan and carry out an experiment designed to determine the influence of various factors on the yield and quality of vegetable and medicinal plants, U 02 - is able to give a presentation and lead a discussion on his paper,</p>	<p>Competences:</p> <p>K 01 - has the creativity and ability to work in the group, K 02 - is aware of the need to act in accordance with ethical.</p>		
The way of verification of learning outcomes :	<p>W 01, 02, U 01, 02, K 01, 02 – evaluation of the experiments made during the course</p> <p>W 01, 02, U 01, 02, – multimedia presentation</p> <p>W 01, 02, U 01, 02, – written exam</p>				
Form of documentation of achieved learning outcomes :	Class tests, evaluation of presentation, evaluation of the experiments				
Elements and weights affecting the final grade:	Evaluation of the experiments made during the course – 20%, presentation – 20%, the student activity during practice – 10%, written exam – 40%.				
Place of classes:	Class, laboratory				
<p>Basic and supplementary literature :</p> <p>Basic and Supplementary Literature:</p> <p>Górecki, S R., Grzesiuk. 2002. Fizjologia plonowania roślin. Wyd. Uniwersytetu Warmińsko-Mazurskiego,</p> <p>Kopcewicz J., Lewak S. 1998. Podstawy fizjologii roślin.</p> <p>Stryer L., Biochemia. 1997. PWN. Warszawa</p> <p>Listowski A. 1979. Agrofizjologiczne podstawy produktywności roślin. PWN., Warszawa</p> <p>Piskornik Z. 1994. Fizjologia roślin dla wydziałów ogrodniczych Wyd. AR, Kraków</p> <p>Szweykowska A. 2002. Fizjologia roślin, Wyd. UAM.</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>60 h</b>
The total number of ECTS points that a student receives in classes requiring direct participation of academic teachers or other lecturers:	<b>1,5 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 - knows mechanisms of regulation and control of plant life processes affecting the economic yield,	K_W03	2
Knowledge	W 02 - understands of the possibility of adapting the cultivation in the field and under covers in order to optimize yield	K_W04; K_W04	2;2
Skills	U 01 - is able to plan and carry out an experiment designed to determine the influence of various factors on the yield and quality of vegetable and medicinal plants	K_U01; K_U02, K_U04	2;2;2
Skills	U 02 - is able to give a presentation and lead a discussion on his paper	K_U06	1
Competences	K 01 - has the creativity and ability to work in the group	K_K02	2
Competences	K 02 – is aware of the need to act in accordance with ethical	K_K04	2

\*)

3 – znaczący i szczegółowy,

2 – częściowy,

1 – podstawowy,