Course Information Sheet

University: *University of Prešov in Prešov*	
Faculty: *Faculty of Humanities and Natural Sciences*	
Code: 2EKO/FYZRA/22	**Title of Course: Plant physiology**
Form of Study: *lectures, laboratory class* ***Number of contact hours:*** *per week: 2 lectures, 1 laboratory class* *per level/semester: 20 lectures, 10 laboratory class, 40 preparation for laboratory work, 50 self study* ***Method**: physical presence/traditional classrooms*	
Number of credits: *4*	
Semester: *3rd semester /2nd year of study*	
Degree/Level: *bachelor*	
Prerequisities:	
Grading Policy (Assessment/Evaluation): *During the semester, it will be mandatory to writting excercises for 10 points; to obtain an A rating it is necessary to obtain at least 90%, to obtain an B rating at least 80%, to obtain a C rating at least 70%, to obtain a D rating at least 60 points and to obtain an E rating at least 50%.*	
Aims and Objectives: *After completing the course, the student will be able to explain the principle of basic metabolic processes of the plant organism, will understand the technical terms and use them fluently and correctly in the discussion. Student will be able to prepare basic experiments to demonstrate the physiological processes of plants.*	
Syllabus/Indicative Content: *1. Introduction to plant physiology (historical overview, important researchers, connection of plant physiology with other scientific disciplines, basic rules and duties in the laboratory).* *2. Plant development (plant growth, individual growth stages)* *3. Mineral nutrition (soil as a source of basic nutrients, micro and macro elements)* *4. Photosynthesis - light phase (photosytemes and pigments)* *5. Photosynthesis - dark phase (plants C3, C4 and CAM)* *6. Respiration - plant respiration (mitochondria, glycolysis, oxidative decarboxylation, krebs cycle, respiratory chain)* *7. Chemosynthesis and heterotrophy* *8. Hormonal regulation of plant metabolism (Auxins, gyberelins, cytokines* *9. Plant movements (tropisms and nastie)* *10. Biological rhythms of plants - dormancy, germination, flowering, aging* *11. Plant defense - secondary metabolites* *12. Physiology of plant production* *13. Ways of perception of exogenous stimuli by plants*	
Suggested readings: Masarovičová, E. – Repčák, M. a kol. 2002. Fyziológia rastlín. UK v Bratislave Taiz L.- Zeiger E. 2010. Plant Physiology. Sinauer Associates Maryland *Schopfer, M.1995. Plant Physiology. Springer. ISBN 978-3-642-081-96-5* *Repčák, M. Návody na cvičenia z fyziológie rastlín. UPJŠ - Košice*	

Language of Instruction: *slovak*

Other course information:

Grading history

A	B	C	D	E	FX
a	b	c	d	e	f

Lecturer/Instructor: *RNDr. Daniela Gruľová, PhD.*

Last update: 9. mája 2022

Approved by: