"Functional plant anatomy 2"		
Institute of Plant Genetics Polish Academy of Sciences	Coordinator: dr hab. Lidia Błaszczyk, prof. IPG PAS	Lecturer: Prof. Robert Malinowski IPG PAS
General information:		

Number / form (s) / type (s) of classes	A series of lectures, 12 didactic hours	
	(supervised by lecturers)	
Didactic cycle	Summer semester 2023	
Language	English	
ECTS credits	2	

Objective of the course:

To understand basic principles of plant anatomy

Topics:

- 1. Interface of plant signaling and development (2hr) []
- 2. Mechanisms underlying plant growth (2hr) []
- 3. Plant development orchestration by growth regulators (4 hr) []
- 4. The relationship between mineral nutrition and plant development (2hr) []
- 5. Molecular mechanisms of plant organ patterning (2hr)

Effects of the course (in terms of knowledge, skills):

- 1. Student will acquire basic information on the types of signaling molecules and their action during plant development
- 2. Will gain information on the molecular and biophysical mechanisms underlying plant organ growth
- 3. Will learn about the synthesis, transport, signaling and breakdown of major plant phytohormones and their involvement in regulation of plant development
- 4. Will understand how mineral nutrition affects plant development and how plant responses to particular deficits are regulated.
- 5. Will learn on major molecular networks orchestrating plant organ patterning.

Course content:

- Basics of molecular plant signaling •
- Introduction to plant biophysics and principles of organ growth at the molecular and • cellular level
- Introduction to plant growth regulators
- Introduction to mineral nutrition of plants
 - Molecular aspects of plant organ patterning.

Teaching methods / techniques:

lectures in English, on line lectures [zoom lectures]

Evaluation of learning outcomes:

• written exam