1.	Field of study	Biotechnology
2.	Academic year of entry	2016/2017 (winter term), 2017/2018 (winter term)
3.	Level of qualifications/degree	first-cycle studies
4.	Degree profile	general academic
5.	Mode of study	full-time

Module: Plant physiology

Module code: 1BT_20

1. Number of the ECTS credits: 6

2. Learning outcomes of the module

code	description	learning outcomes of the programme	level of competence (scale 1-5)
1BT_20_1	Defines, classifies and describes the basic terms used in plant physiology	1BT_W02	2
1BT_20_2	Describes the processes associated with the exchange of substances between the plant cell and the environment	1BT_W02	3
1BT_20_3	Describes the basic catabolic and anabolic processes particularly in plants	1BT_W06	2
1BT_20_4	Can show the relationship between different metabolic pathways	1BT_W06 1BT_W10	3 5
1BT_20_5	Describes and explains the processes during the growth and development of plants	1BT_K01 1BT_W11	5 5
1BT_20_6	Performs simple experiments, describes the effects of the experiment, analyzes the results, draws conclusions and presents them in the form of a report	1BT_U01 1BT_U04 1BT_U06	5 5 5
1BT_20_7	Has a habit of reading the latest scientfic literature	1BT_K04	5

3. Module description

Description	Module Plant Physiology enables to learn and understand the following processes occurring in plants: uptake and transport of water, uptake and role of macro and micronutrients, , types of photosynthesis and their chemistry; catabolic occurring primarily in plants, types of plant hormones and their synthesis, the role of plant hormones in the growth and development of plants and their mechanisms of action, photomorhogenesis, photoperiodic induction, photoperiodism, types of movement of plants, phytochrome and cryptochrome and their role in plant growth and development.
Prerequisites	Basic knowledge of botany anf plant physiology

4. Assessment of the learning outcomes of the module

code	type	description	learning outcomes of the module
1BT_20_w_1	Activity during practicals	During practicals the following skills will be assessed: the use of laboratory equipment, proper experiment implementation, interpreting the results and conclusions drawing, preparing a written final report of the experiments performed.	1BT_20_6
1BT_20_w_2	Written colloquia	Written colloquia checking the knowledge of manual	1BT_20_1, 1BT_20_2, 1BT_20_3, 1BT_20_4, 1BT_20_5
1BT_20_w_3	Written examination	It covers issues discussed in lectures and information contained in recommended literature.	1BT_20_1, 1BT_20_2, 1BT_20_3, 1BT_20_4, 1BT_20_5, 1BT_20_7

5. Forms of teaching

code	form of teaching			required hours of student's own work		assessment of the learning outcomes of the module
	type	description (including teaching methods)	number of hours	description	number of hours	
1BT_20_fs_1	lecture	Lecture using multimedia devices	30	Work with manual, acquisition of knowledge from the lectures	20	1BT_20_w_3
1BT_20_fs_2	laboratory classes	Individual work in the laboratory, performing experiments on the basis of instructions, the analysis of the results. Consultations: Explaining difficult parts of the material	60	Preparing for exercises based on the literature. Preparation of material required to pass the written colloquia	40	1BT_20_w_1, 1BT_20_w_2