

Module Title: Molecular Crop Physiology							
Module ID/Code: NPW-040 [780800400]							
1. Content and intended learning outcomes							
Learning content:	In the practical Molecular Crop Physiology students will gain first hands-on experience and training in basic experimental techniques that are required for all advanced studies in physiology, molecular biology, genetics and biotechnology. This includes preparation of buffer solutions and media, enzyme assays, basic experiments related to photosynthesis, plant nutrition, responses of plant to abiotic or biotic stress, DNA isolation, PCR, gel electrophoresis, spectroscopic techniques.						
Learning outcomes							
After a successful completion of the course, the students...							
<ul style="list-style-type: none"> - understand the general rules for laboratory-based experimental work. - can use basic laboratory techniques. - can design and conduct simple physiological experiments. - can document and report on physiological experiments (scientific writing). 							
2. Prerequisites							
obligatory	Crop Physiology						
recommended							
Maximum number of students	20 students						
3. Study program allocation							
Study program						Compulsory/ Elective	Semester
M.Sc. Crop Sciences						E Focus MCS	3.
4. Teaching and learning methodes							
Type of course	Interval	Topic	Language of instruction	Group size	SWS	Workload [h]	
						Contact time	Self-study
P* (blocked)	full-day block	hands-on experimental work	English	20	6,0	80,0	100,0
5. Course cycle				6. Workload [h]		7. Duration	8. Credits (ECTS)
WS				180		1	6,0
9. Requirements for the rewarding of credits (ECTS)							
Types of Assessment	Prerequisites for admission to the Assessment			Graded yes/no	Language (exam)	Weighting factor	
Laboratory exercise [780800409]	Regular participation			graded	English	50%	
Report [780800408]	Regular participation			graded	English	50%	
Academic Achievements							
10. Module coordination							
Module coordinator							
Prof. Dr. Andreas Meyer							
Teaching person							
Prof. Dr. Andreas Meyer; Prof. Dr. Peter Dörmann; Prof. Dr. Florian Grundler; Prof. Dr. Frank Hochholdinger; Prof. Dr. Gabriel Schaaf							
Institute/ Department							
Agrar-, Forst- und Ernährungswissenschaften, Biologie							
11. Further information							