

Module variant to: Trends in Molecular Plant Sciences

Module: Molecular Plant-Microbe Interactions			
University/Department/Teaching Unit: Freie Universität Berlin/Biology, Chemistry, Pharmacy/Biology			
Module coordinator: Marcel Wiermer, Tiziana Guerra			
Prerequisites: none			
Learning objectives: The participants will gain a deep understanding of general and specific questions in the research of plant-pathogen interactions, as well as the theoretical and experimental means for their analysis. They learn how to formulate hypotheses, to plan and conduct the experiments, to present and reflect own results (e.g. methodological limitations) and to develop problem solving strategies together with their peers. The students will also be able to find, present, evaluate and discuss relevant literature and to identify contradictory findings and research needs.			
Content: The lecture covers the theoretical background and basic concepts of plant-microbe interaction biology and inter-organismic communication. The students will present and discuss current topics, methods and applications in plant-microbe interaction research. Research-oriented experiments using methods for the analysis of plant-microbe interactions and plant immune responses at the biochemical, cell biological and molecular level will be conducted in small laboratory groups			
Modes of instruction	Contact hours (hours per week during the semester)	Types of active participation	Workload (in hours)
Lecture (V)	2	–	Class attendance (lecture) 30 Preparation, before and after (lecture) 30
Seminar (S)	1	Oral presentation	Class attendance (seminar) 15 Preparation, before and after (seminar) 80
Safety lab (sP)	8	Carrying out and documenting experiments	Class attendance (safety lab) 120 Preparation, before and after (safety lab) 75 Exam preparation and exam 100
Module assessment		Written exam (60 minutes), wholly or partially in multiple-choice format; can also be carried out electronically or written report on research results (approx. 10 pages) or examination colloquium (approx. 20 minutes)	
Language		English	
Regular attendance required		Seminar and safety lab: yes, lecture: attendance recommended	
Total workload		450 hours	15 credit points
Duration		one semester	
Frequency		irregular	
Applicability		Master's degree program M.Sc. Biology	

Utilization in the following specializations (decision by the examining board):

Biodiversity, Evolution and Ecology	x
Genetics and Genomics	x
Microbiology	x
Molecular- and Cellular Biology	x
Molecular Plant Sciences	x
Neurobiology	
Biology	x