

Module Name	Module Code
Introduction to Molecular Biology	AEF-agrig001
Module Coordinator	
Prof. Dr. Christian Jung	
Organizer	
Institute of Crop Science and Plant Breeding - Plant Breeding	
Faculty	
Faculty of Agricultural and Nutritional Sciences	
Examination Office	
Faculty of Agricultural and Nutritional Sciences - Examination Office	

ECTS Credits	6
Evaluation	Graded
Duration	one semester
Frequency	Only takes place during winter semesters
Workload per ECTS Credit	30 hours
Total Workload	180 hours
Contact Time	60 hours
Independent Study	120 hours
Teaching Language	English

Recommended Requirements			
Fundamental knowledge in biology, genetics and gene technology			
Module Courses			
Course Type	Course Name	Compulsory/Optional	SWS
Lecture	Introduction to Molecular Biology I	Compulsory	1
Lecture	Introduction to Molecular Biology II	Compulsory	1
Internship	Molecular Biology I	Compulsory	2

Examination(s)				
Examination Name	Type of Examination	Evaluation	Compulsory / Optional	Weighting
Oral Examination: Introduction to Molecular Biology	Oral Examination	Graded	Compulsory	75
Protocol: Introduction to Molecular Biology	Protocol	Graded	Compulsory	25
Further Information on the Examination(s)				
1.+2. period in winter semester 1. period in summer semester examiner: oral=75% Dr. Melzer oder Prof. Dr. Jung Practical report=25% Dr. Melzer QIS: 90100 with number of Examination 90110 + 90120				

Course Content
Isolation of nucleic acids, all major nucleic acids techniques, PCR and its derivatives, hybridization techniques and gel electrophoresis, restriction ligation procedures, cloning into different vector systems, fundamentals of bioinformatics, legal aspects of gene technology
Learning Outcome
The students understand how to use basic techniques in molecular biology. They understand the theoretical background and they are able to work with these techniques. They are able to perform basic experiments in molecular biology and genetics and they learn how to apply basic techniques for investigating nucleic acids.
Reading List
Textbooks, lab protocols, lecture notes, internet
Additional Information
Maximum number of participants: 20 Enrollment by OLAT within workdays Monday through Friday in the 1st week of the 2. audit period of the preceding semester. Following information are necessary: matriculation number last name first name degree study program stu-Email The allocation of the places takes place in the 2nd week of the 2. audit period of the preceding semester. Acceptance of the place by students only through participation at the first day of the course. Students without a place can get a place at the first day of the course by move-up procedure.

Use	Compulsory / Optional	Semester
Master, 1-Subject, Agricultural Sciences, Specialisation Agricultural Economics, (Version 2017)	Optional	-
Master, 1-Subject, Agricultural Sciences, Specialisation Agricultural Economics, (Version 2013)	Optional	-
Master, 1-Subject, Agricultural Sciences, Specialisation Agribusiness, (Version 2017)	Optional	-
Master, 1-Subject, Agricultural Sciences, Specialisation Agribusiness, (Version 2013)	Optional	-
Master, 1-Subject, Agricultural Sciences, Specialisation Crop Sciences, (Version 2017)	Optional	-
Master, 1-Subject, Agricultural Sciences, Specialisation Crop Sciences, (Version 2013)	Optional	-
Master, 1-Subject, Agricultural Sciences, Specialisation Animal Sciences, (Version 2017)	Optional	-
Master, 1-Subject, Agricultural Sciences, Specialisation Animal Sciences, (Version 2013)	Optional	-
Master, 1-Subject, Agricultural Sciences, Specialisation Environmental Sciences, (Version 2017)	Optional	-
Master, 1-Subject, Agricultural Sciences, Specialisation Environmental Sciences, (Version 2013)	Optional	-
Master, 1-Subject, AgriGenomics, (Version 2017)	Compulsory	-
Master, 1-Subject, AgriGenomics, (Version 2010)	Compulsory	-
Master, 1-Subject, Dairy Science, (Version 2017)	Optional	-
Master, 1-Subject, Nutritional and Food Science, (Version 2013)	Optional	-
Master, 1-Subject, Nutritional and Consumer Economics, (Version 2017)	Optional	-
Master, 1-Subject, Nutritional and Consumer Economics, (Version 2013)	Optional	-