

Module Name		Module Code	
Recent Progress in Plant Breeding and Genome Research		agrigAEF018-01a	
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	Takes place every semester		
Workload per ECTS Credit	30 hours		
Total Workload	180 hours		
Contact Time	60 hours		
Independent Study	120 hours		
Teaching Language	English		
Recommended Requirements			
Advanced understanding of genetics, molecular biology, and plant breeding. Module agrigAEF005-01a and AEF-agrig007 successfully passed.			
Module Courses			
Course Type	Course Name	Compulsory/Optional	SWS
Seminar	Plant Breeding Research and Crop Genome Analysis	Compulsory	2
Seminar	Literature Club: Current Trends in Plant Breeding and Genome Research	Compulsory	1
Seminar winter semester only	Current Methods in Applied Plant Breeding	Compulsory	1

Field exercises summer semester only	Practical Plant Breeding and Crop Genome Research	Compulsory	1
Prerequisites for Admission to the Examination(s)			
Regular visits of Field exercises in summer semester are necessary.			

Examination(s)				
Examination Name	Type of Examination	Evaluation	Compulsory / Optional	Weighting
Seminar Paper with Assignment: Recent Progress in Plant Breeding and Genome Research	Seminar Coursework	Graded	Compulsory	100
Further Information on the Examination(s)				
1.+2. period in winter semester 1.+2. period in summer semester examiner: Prof. Dr. Jung / Dr. Melzer / Dr. Emrani QIS: 92100 with number of Examination 92110 winter semester: seminarpaper summer semester: protocol: Practical plant breeding				
Course Content				
This course teaches an advanced understanding of plant breeding and its underlying scientific discipline in theory and practice. The students learn the latest progress in breeding research with a focus on omics technologies and the application in breeding. Recent publication from high impact factor journals are discussed in the literature club. Scientists from the plant breeding institute demonstrate their running research projects in a research seminar where students get a deep impression of breeding research. Moreover, they learn how to design and perform scientific experiments and how to evaluate the data. In the spring term, a field trip to a breeding company is part of the module where students learn how to breed a new variety.				
Learning Outcome				
Students should gain an advanced understanding of the application of genetics and genomics in plant breeding research and practice. By studying latest research articles they will learn how to read, understand and criticize scientific manuscripts. Students shall be able to understand the details of practical plant breeding and how state of the art biotechnology and omics technology is implemented in breeding today. They will gain competence to apply biotech and omics technology in breeding research and in practical plant breeding as well. The course teaches the students how to design and perform a scientific experiment. The students learn how to present and discuss scientific results..				
Reading List				
Announced at the beginning of the semester: topic specific articles will be distributed as electronic files and weblinks, textbooks will be available from the plant breeding library of the CAU Kiel				

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)	Optional	-
Master, 1-Subject, AgriGenomics, (Version 2010)	Optional	-
Master, 1-Subject, Dairy Science, (Version 2017)	Optional	-
Master, 1-Subject, Nutritional and Consumer Economics, (Version 2017)	Optional	-
Master, 1-Subject, Nutritional and Consumer Economics, (Version 2013)	Optional	-