

**Examination Regulations (Rules)
of the Faculty of Agricultural and Nutritional Sciences
at Christian-Albrechts-Universität zu Kiel (Kiel University)
for students of AgriGenomics,
leading to a Master of Science degree (M.Sc.) – 2023
of 20 July 2023**

Version published on 21 September 2023 (NBI HS MBWFK Schl.-H. p. 80)

Based on Section 52 (1) 1 of the Schleswig-Holstein Higher Education Act (HSG) in the version published on 5 February 2016 (GVOBl. Schl.-H. p. 39), last amended by Article 1 of the Act of 3 February 2022 (GVOBl. Schl.-H. p. 102), after a resolution was passed by the Convention of the Faculty of Agricultural and Nutritional Sciences at Kiel University of 29 June 2023, the following Rules were issued:

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**§ 1
Scope of application**

- (1) These degree-specific examination regulations (FPO) in conjunction with the Examination Procedure Regulations (Rules) of Christian-Albrechts-Universität zu Kiel for students of Bachelor's and Master's Degree Programmes (PVO) apply to the Master's degree programme "AgriGenomics" at Kiel University.
- (2) The degree-specific examination regulations of the respective faculties or departments apply for imported modules, in particular for admission to and performance of examinations.

§ 2

Objective of the degree programme

The Master's degree programme in AgriGenomics conveys advanced knowledge and application skills of genomic processes in agricultural sciences with a focus on the topics of plant breeding, plant nutrition, phytopathology and animal breeding. Understanding the complex interrelationships of genetic architectures and physiological processes enables the graduates to independently research further scientific issues, for example in doctoral research projects. They are also able to profoundly evaluate the latest technological developments in genomics and molecular biology, and assess their usefulness for scientific research as well as for practical implementation in the fields of phytopathology, plant nutrition and plant and animal breeding. The practical experience in the laboratory gained during the degree programme and the contacts with international institutions and companies acquired in the framework of field trips provide the ideal basis for a qualified career entry.

§ 3

Academic title

- (1) If the Master's degree programme is completed with at least an overall grade of "sufficient", the Faculty of Agricultural and Nutritional Sciences awards the degree of Master of Science (M.Sc.).
- (2) The conditions for completing the fast-track doctoral degree with simultaneous acquisition of the Master's degree are set out in the Doctoral Degree Regulations for the Faculty of Agricultural and Nutritional Sciences.

§ 4

Admission to the Master's degree programme

- (1) Prerequisites for admission to the Master's degree programme are:
 1. Submission of a complete application for the aptitude test for the Master's degree programme within the deadlines set by Kiel University and announced on the AgriGenomics degree programme's website. A degree certificate according to Number 2 with a transcript of records or, if the degree certificate is not yet available at the time of application, a transcript of records with at least 120 ECTS credits and a provisional overall grade issued by the respective institution of higher education, is to be submitted with the application.
 2. A degree programme with a normal course of study of at least three years and with a scope of at least 180 ECTS credits at a higher education institute in the Federal Republic of Germany or an equivalent foreign higher education institute in agricultural sciences or a related subject. In terms of scope and content, the degree programme must not exhibit any substantial differences compared to Kiel University's Bachelor's degree programme in Agricultural Sciences.
 3. Proof of the required foreign language skills in English:
 - a. IELTS: overall score of 6.5 (with at least 6.0 in each of the four components) or
 - b. TOEFL® ITP (Paper-based test): overall score of 580 with a Test of Written English score of 5.5 or
 - c. TOEFL® iBT (Internet-based test): overall score of 90 with component scores of at least 20 points or
 - d. Cambridge Certificate of Advanced English (CAE): grade A or
 - e. Cambridge Certificate for Proficiency in English (CPE): grade B or
 - f. For applicants with a German general certificate of qualification for admission to higher education (HZB), an assessment in the examination subject English in the Abitur of at least 11 points or a grade of 2.0 or
 - g. Evidence of a 6-month stay in an English-speaking country with professional relevance to the course of study.
 4. Evidence of the presence of knowledge in genomics, proteomics, phytopathology and plant nutrition required for admission to the Master's degree programme and evidence of a basic ability to interlink this knowledge in the form of an essay graded "passed"

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according to the task and word count set within the framework of the application. The essay shall be graded “passed” or “failed” by members of the Examination Committee. The overall grade is calculated from the average of the grades given by each committee member. If no clear result is reached, the grade given by the Chairperson of the Examination Board shall be the decider.

- (2) The Recognition Rules (Anerkennungssatzung) apply for the decision regarding recognition of the degrees qualifying for a professional career and the recognition of coursework and examinations. For all other decisions to be made according to these provisions, an Examination Committee shall be set up, comprising members of the Examination Board of the Master’s degree programme, excluding the student member. The Examination Committee can transfer decision-making powers to its individual members.

§ 5

Structure of curriculum

- (1) The standard period of study for the Master’s degree programme is four semesters. The degree programme encompasses approximately 60 weekly 45-minute teaching units for the duration of one semester of about 12 weeks (Semesterwochenstunden - SWS) and 120 ECTS credits, including 30 ECTS credits for the Master’s thesis. The type and scope of courses and lectures in the compulsory modules are listed in Annex 1.
- (2) The Master’s degree programme includes the following modules (Annex 1)
 1. Nine compulsory modules – 54 ECTS credits
 2. Compulsory elective modules covering 36 ECTS credits
- (3) The compulsory elective modules are to be selected from the list of available modules for the AgriGenomics degree programme (Annex 2). With the Examination Board’s consent, graded modules covering up to twelve ECTS credits from other Master of Science degree programmes, from this faculty or other faculties, can be selected provided there are free spaces on the course, and as long as they correspond to the requirements in the AgriGenomics modules.

§ 6

Academic year

The academic year applies to this degree programme. Registrations for odd-numbered semesters are only possible for a winter semester, with registrations for even-numbered semesters only possible for a summer semester.

§ 7

Restriction of admission to compulsory or compulsory elective courses

- (1) The number of places available for the individual compulsory or compulsory elective courses will be determined by the Faculty Conventions at the request of the module coordinator. If more students initially register for the courses than there are places available, the responsible committee will determine whether the remaining students can be accommodated through other or additional courses.
- (2) If it is not possible to accommodate all the remaining students, the course administrator will select a number of students from those registered for a degree programme in which the course is envisaged as part of the curriculum, who have promptly registered by the date stipulated by the course administrator and who satisfy the conditions of attendance. Preference is to be given to students whose number of semesters would be increased by non-admission. Equally ranked students will be selected by drawing lots. In order to avoid cases of hardship, the module coordinator may deviate from this procedure upon request.
- (3) Admission to compulsory elective modules can be made dependent on relevant prior knowledge, which is to be announced in a suitable manner. The Examination Board may set appropriate conditions.

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§ 8

Further prerequisites for admission to module examinations

- (1) If a module contains lab courses or individual practical exercises marked in Annexes 1 and 2, admission to the examination assumes regular participation in these courses.
- (2) Examination prerequisites in accordance with Annexes 1 and 2 may be requested for admission to the examinations. Individual details will be suitably announced at the start of the respective semester.
- (3) If a module contains courses which are not mentioned in (1), then admission to the examination requires regular attendance at these courses, if such courses are comparable with those in (1). This is the case for field exercises because the individual students cannot achieve the qualification objective without regular attendance, attendance is necessary in order to grasp the basic subject-specific methods, or acquiring competence is dependent on the presence of the other participants, or on being present at a certain place. The key focus of the field trip, after appropriate preparation through traditional teaching formats (lectures, exercises, practical exercises), is for students to explore unknown terrain (or a company/business), with the aim of giving the students insight into practical agricultural and nutritional sciences through an interesting range of courses. Field exercises and field trips do not differ significantly regarding their key attributes, but rather, field exercises are comparable with the teaching format of the field trips, due to their defined nature as predominantly "practical-oriented field trips" in terms of Section 52 (12) HSG.
- (4) If course dates are missed, up to a maximum of 20% of the attendance requirements for the course dates, however, for reasons stated under Section 52 (4) HSG, in justified exceptional cases, at the request of the student, the module coordinator may specify substitute performance for those parts of the course that were missed. The reasons for failing to attend courses must be proven immediately; in the case of illness by a doctor's note. In the case of regular weekly courses held over the entire lecture period, Sentence 1 above permits a maximum of 20% of the course dates to be missed without giving reasons for the non-attendance.
- (5) Modules for which admission to the examination requires regular attendance are marked in Annexes 1 and 2. For all other courses, regular participation is not required for admission to the examinations.

§ 9

Teaching and examination language

Lectures will be offered in English. Examinations will be in English.

§ 10

Examination Board

Contrary to Section 4 (2) Sentence 1 of the Examination Procedure Regulations (PVO), the Examination Board consists of four members who are university lecturers, one member from the scientific personnel and two members from the student body. The Dean of Studies and the study coordinator shall have an advisory vote.

§ 11

Module examinations and module grades

- (1) The type and number of graded module examinations required as part of the modules can be found in Annexes 1 and 2.
- (2) Oral examinations (M), oral presentations (R) and seminar coursework (SL) are permitted as oral types of examination. The duration of an oral examination must be at least 15 minutes per candidate, but may not exceed 45 minutes.
- (3) Written exams include written examinations (K), term papers (H), assignments (PA) and protocols (P). The duration of a written examination (K) is usually at least 30 minutes and

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no longer than 90 minutes. The Examination Board determines exceptions, such as in the case of examinations with a practical section.

- (4) A seminar contribution (Sb), consisting of a presentation and a written report, is admissible as a further examination.
- (5) If a module examination consists of several examinations, the module grade will be calculated using the weighting of the individual examinations indicated in Annexes 1 and 2.

**§ 12
Master's thesis**

- (1) Students who have obtained at least 60 ECTS credits in examinations from completed modules may be admitted to a Master's thesis.
- (2) The period from when the topic is issued until the written part of the Master's thesis is submitted is 26 weeks.
- (3) The topic of the Master's thesis may be returned only once and only within six weeks of the topic being issued.
- (4) When applying for admission to the Master's thesis, the candidate may propose a topic for the thesis, in agreement with the supervisor, without this giving rise to any claim for the proposal to be considered. The Examination Board may only appoint people with a doctorate as the second examiner.
- (5) In exceptional cases and with the consent of the Examination Board, the Master's thesis may be prepared at an institution outside the University, provided that appropriate supervision of the candidate is available there. Supervision may also be provided by people with a doctorate working at the supervising facility, who are qualified in accordance with Section 5 of the Examination Procedure Regulations (PVO). In cases of doubt the Examination Board will decide.
- (6) The Master's thesis is to be written in English.
- (7) Two copies of the Master's thesis plus one version saved on a data carrier suitable for electronic data processing are to be submitted to the responsible Examination Office in the form prescribed in the Examination Board guidelines.
- (8) The Master's thesis consists of the preparation of a written thesis and the oral defence. These are weighted in a ratio of 90%/10% in the overall grade for the Master's thesis.
- (9) The Master's thesis is to be assessed by both examiners within six weeks of submission.

**§ 13
Passing the Master's examination and calculating the overall grade**

- (1) The Master's examination has been passed if all the necessary compulsory module examinations indicated in Annex 1 (programme schedule) have been passed and a sufficient number of ECTS credits has been earned through passing compulsory elective modules in the compulsory elective modules in Annex 2 and the Master's thesis and therefore the necessary number of ECTS credits.
- (2) The calculation of the overall grade includes:
 1. the module grades for the compulsory modules weighted with the ECTS credits allocated to the relevant module,
 2. the grade for the Master's thesis weighted with 30 ECTS credits,
 3. the section grade of the compulsory elective section weighted with 36 ECTS credits. The section grades are calculated by taking the highest grades for the modules assigned to the respective section in question, for which the total ECTS credits must reach the number of ECTS credits required as a minimum for that section. If the ECTS credits for the final module taken into account exceed the total of ECTS credits required

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for this section, only ECTS credits up to attainment of the total number of ECTS credits required will be taken into account.

- (3) The calculation of the overall grade within the framework of a fast-track doctoral degree is set out in the Doctoral Degree Regulations for the Faculty of Agricultural and Nutritional Sciences.

§ 14

Transitional provisions

- (1) It is possible for students who are registered for the Master of Science degree programme in AgriGenomics at Kiel University at the time when these Rules enter into force to obtain a degree up until the end of the summer semester 2023 in accordance with the degree-specific examination regulations which ceased to be in force pursuant to Section 15 (2). If modules are offered in a changed form, they must be completed in the new version. If compulsory modules from the degree-specific examination regulations are no longer offered in accordance with § 15 (2), substitute modules shall be named by the Examination Board.
- (2) Students studying according to the examination regulations which ceased to be in force pursuant to Section 15 (2) can apply to change to the new degree-specific examination regulations. Module examinations which have been completed and passed in full by the date these Rules enter into force will remain valid.
- (3) If a student has completed and passed independent parts of a module examination, these will be recognised. The Examination Board determines which additional examinations are necessary to complete the module, under consideration of the module's learning targets and the purpose of the examination.
- (4) Examinations failed before these Rules entered into force will be set off against the number of attempts allowed under the new examination regulations, provided the structure of the new module examination permits recognition.
- (5) Upon application by the candidate, the Examination Board decides regarding special cases of hardship for which the student is not responsible.

§ 15

Entry into force, expiry

- (1) These Rules enter into force on 1 October 2023.
- (2) At the same time, the degree-specific Examination Regulations (Rules) of the Faculty of Agricultural and Nutritional Sciences at Christian-Albrechts-Universität zu Kiel (Kiel University) for students of AgriGenomics leading to a Master of Science degree (M.Sc.) - 2021 of 20 November 2020 (NBI. HS MBWV Schl.-H. p. 82) last amended by the Rules of 10. Februar 2022 (NBI. HS MBWK Schl.-H. S. 22), cease to be in force.

The University Board at Kiel University granted its approval in accordance with Section 52 (1) 1 of the Schleswig-Holstein Higher Education Act (HSG) in its letter dated 19 July 2023.

Kiel, 20 July 2023

Prof. Dr Karl H. Mühling
Dean of the Faculty of Agricultural and Nutritional Sciences
at Kiel University

Annex 1: Programme schedule for the AgriGenomics Master's degree programme

Period	Module code	Module description	Compulsory	Import	Examination prerequisites	Graded exam	Teaching method	SWS	Compulsory participation	ECTS	
										Sem.	Year
1st semester	agrigAEF001-02a	Introduction to Molecular Biology	x			M 75%, P 25%	V/PÜ	2/2	PÜ	6	
	AEF-agrig002	Organization and Analysis of Eukaryotic Genomes	x			M	V	4		6	
	agrigAEF003-01a	Biochemistry and Proteomics	x			M	V	4		6	
	AEF-agrig004	Introduction to Crop and Animal Breeding	x			M	V	4		6	
	agrigAEF022-01a	Introduction to Bioinformatics and Computational Genomics	x		P (50%)	K	V/PÜ	2/6	PÜ	6	
										Σ 30	
2nd semester	AEF-agrig006	Applied Genome and Proteome Research	x			P	P	4	P	6	
	agrigAEF007-01a	Applications of Genomics in Agriculture	x			K	V	4		6	
	agrigAEF005-01a	Genomics in Research and Industry	x			Sb	S/GÜ	2/2.75	GÜ	6	
	dsAEF010-01a *	Biometrical Planning and Inference	x			M	V/PÜ	3/1		6	
		Compulsory elective module								6	
										Σ 30	Σ 60
3rd semester Mobility windows		Compulsory elective module								6	
		Compulsory elective module								6	
		Compulsory elective module								6	
		Compulsory elective module								6	
		Compulsory elective module								6	
										Σ 30	
4th semester	agrigAEF200-01a	Master's Thesis	x		**	SA 90%+V10%				30	
											Σ 30

Key: M = mündliche Prüfung/oral examination - R = Referat/oral presentation - K = Klausur/written examination - P= Protokoll/protocol - PA = Praktikumsaufgaben/assignment - Sb = Seminarbeitrag/seminar contribution (zusammengesetzte Prüfung - 2 Teilprüfungen/composite examination - 2 partial examinations) - SA + V = schriftliche Ausarbeitung + Verteidigung/written report + defence (zusammengesetzte Prüfung - 2 Teilprüfungen/composite examination - 2 partial examinations)

V = Vorlesung/lecture, S = Seminar, Ü = Übung/exercise, PÜ = Praktische Übung/practical exercise, P = Praktikum/practical, GÜ= Geländeübung/field exercise

SWS: Semesterwochenstunden = weekly 45-minute teaching units

*= agrarAEF202-01a Biometrische Versuchsplanung und -auswertung can be selected as an equivalent module.

** The admission requirement is at least 60 ECTS credits in examinations from completed modules

Annex 2 Table of compulsory elective modules with types of teaching and number of hours per week during the semester (SWS)

Module code	Module name	Period	ECTS	Import	Examination prerequisites	Graded exam	V SWS	S SWS	PÜ SWS	GÜ SWS	P SWS	KGP SWS	Compulsory participation
AEF-agrig010	Utilization of Genome Analysis in Animal Breeding	WS	6			M	4						
agrigAEF011-01a	Molecular Plant Nutrition	WS	6		passed Sb	M	2	1	1				
agrigAEF012-02a	Genetically Modified Plants	SS	6		**	M 75 %, P 25%	2				2		P
agrigAEF013-01a	Biotechnology in Phytomedicine	SS	6		* passed and graded protocol from a practical	M	2				2		P
agrigAEF014-01a	Biocontrol Biotechnology	WS	6			M	2	1			1		P
agrigAEF015-01a	Functional Genomics in Phytopathogen Research	WS	6		passed and graded protocol from the practical exercise*	M	2		2				
AEF-agrig017	Biological Systems as Bioreactors	SS	6			M	2	2					
agrigAEF018-01a	Recent Progress in Plant Breeding and Genome Research	WS/SS	6			Sb		WS 4 SS 3		SS 1			GÜ
agrigAEF020-02b	Selection in Plant Breeding	SS	6			P	1		1		2		P/PÜ
agrigAEF021-01a	Epigenetics – basics and applications in plants	SS	6		passed Sb	M	2	2					
AEF-agr046	Methods for Breeding Field Crops	WS	6		***	M	4						
AEF-el008	Nutrigenomics and Nutrigenetics	WS	6			K	2	2					
dsAEF003-01a	Health Management in Dairy Herds	WS	6		Oral presentation	M		3.5		0.5			GÜ
AEFds008	Animal Behavior and Welfare	SS	6		A passed oral presentation - ungraded	M	2	1	1				PÜ
biol214	Environmental Stress Adaptation in Plants	WS	5	x		K 70% SL 30%		1	3				S/PÜ
biol244b	Population Genomics	WS	6	x		P 50% R 50%		2			4		P
biol260	Molecular Genetics of Plants and Fungi	WS/SS	10	x		P 80% SL 20%						8	P
biol265	Molecular Genetic Studies on Plant Developments	WS/SS	10	x		P 80% SL 20%						8	P
agrarAEF890-01a	Mineral Nutrition and Quality of Plant Foods	WS/SS	6			M	2	1	1				

Key: M = mündliche Prüfung/oral examination - R= Referat/oral presentation - K= Klausur/written examination - P= Protokoll/protocol - Sb = Seminarbeitrag (zusammengesetzte Prüfung – 2 Leistungen)/seminar contribution (composite examination, 2 pieces), SL = Seminarleistung/seminar coursework
V = Vorlesung/lecture, S = Seminar, PÜ = Praktische Übung/practical exercise, P = Praktikum/practical, KGP = Kleingruppenprojekt/project in small groups, GÜ = Geländeübung/field exercise
SWS: Semesterwochenstunden = weekly 45-minute teaching units

* The grade for the passed protocol is incorporated into the module grade at 25%, if this leads to a grade improvement.

** The admission requirements are passed module examinations in agrigAEF001-02a and AEF-agrig002

*** The admission requirement is a passed module examination in AEF-agrig004