COLLECTION OF DECISIONS AND ORDINANCES OF THE FACULTY OF AGRICULTURE UNIVERSITY OF SOUTH BOHEMIA IN ČESKÉ BUDĚJOVICE

number: 21/2021 17 December 2021

Dean's Ordinance issuing the rules for the admission procedure and the conditions of admission to studies in doctoral degree programmes starting in the academic year 2022/2023

Article 1
General provisions

1. This ordinance announces the rules for the admission procedure for studies in doctoral degree programmes at the Faculty of Agriculture of the University of South Bohemia in České Budějovice (USB) starting in the academic year 2022/2023.
2. The rules for the admission procedure are announced based on Sections 48 to 50 and Section 58(1) of Act No. 111/1998, on Higher Education Institutions (hereinafter as 'Act') and Article 18 of the Statutes of the University of South Bohemia in České Budějovice (hereinafter as 'Statutes').

Article 2
Degree programmes for which it is possible to submit applications for admission to studies

1. In the academic year 2022/2023, applications for admission to studies may be submitted in the following doctoral degree programmes at the USB Faculty of Agriculture:
    - General plant production,
    - Agricultural chemistry and biotechnology
    - General zootechnics.
2. In the event that accreditation is awarded, the USB Faculty of Agriculture will announce the admission procedure for the doctoral degree programme:
    - Agroecology and applied ecology.
3. The expected numbers of students to be admitted to studies are listed in Annexe 1.

Article 3

Rules for submitting and processing study applications

1. Applications for studies are submitted only on the electronic application forms 'Application for studies at a higher education institution' available electronically on the website of the Faculty of Agriculture of the University of South Bohemia.
2. The applicant attaches his/her CV and proof of successful completion of a master's degree (diploma) to the application. If the applicant is unable to submit this document together with the application (e.g. due to the fact that he/she has not yet completed his/her studies in the master's degree programme), he/she will provide the diploma no later than on the day of enrolment.
3. Applicants can submit applications for doctoral degree programmes until 31 May 2022. The Faculty of Agriculture reserves the right to extend the period for accepting applications.
4. The framework topics of the dissertations are listed in Annexe 2. The Faculty of Agriculture recommends that applicants contact the relevant supervisors and consult the study options before applying. If necessary, another topic according to the applicant's interests may be added to the list.
5. If the application suffers from formal shortcomings, the Faculty of Agriculture will return it to the applicant for correction or supplementation. If the applicant does not eliminate the shortcomings within the set deadline, it is considered as if he/she did not submit an application for admission to studies.
6. An applicant who fails to pay the fee set pursuant to Section 58(1) of the Act in the prescribed manner (bank transfer) and by 31 May 2022 is assessed as if he/she had not submitted the application. If the Faculty of Agriculture extends the period for submitting applications, the deadline for payment of the fee will be postponed accordingly.

Article 4

Admission examination

1. Applicants are to demonstrate that they are able to meet the requirements for studies of a doctoral degree programme during an admission examination.
2. The admission examination takes place in an oral form unless otherwise stated. Candidates have to demonstrate their aptitude for scientific work in the given field. The interview is focused on general and current issues of the relevant scientific field and on the knowledge of methodology and state of knowledge in a narrow scientific field of the selected topic of research work. An overview of the framework topics of dissertations for individual degree programmes is given in an annexe.
3. Admission examinations for applicants from abroad can take place remotely through MS Teams.
4. Admission examinations include an English exam. The form of the English exam is to be determined by a committee.

5. The Dean may waive the admission examination in whole or in part. If the Dean waives the examination completely, it is considered that the candidate has demonstrated that he/she meets the requirements for studies.
6. **The main date of the admission examinations is set for 23 June 2022.**
7. **The Dean may announce another date of admission examinations in addition to the abovementioned main date at any time during the academic year, at least one month before the admission examinations are to take place.**
8. The specific date of the admission examination according to the chosen degree programme and the form of study is communicated to each applicant in writing as well as other information about the admission examination including confirmation of receipt of the study application.
9. The alternative date of the admission examination, equivalent to the regular date of the admission examination, is intended only for those candidates who could not attend the regular date for serious reasons (substantiated by an appropriate confirmation). The seriousness of the reason will be assessed by the Dean of the faculty, who will make the final decision on whether the student will take the admission examination on an alternative date. Participation in admission examinations to another higher education institution is not an excuse.
10. The admissions committee operates in accordance with the following basic rules:
    a) The admission committee (at least three members) and its chair are appointed by the Dean of the faculty upon a proposal from the doctoral studies board. The chair of the committee is usually the chair of the doctoral studies board. Committee members can be members of the doctoral studies board or other important experts.
    b) The quorum of the committee is to be a minimum of three of its members. The committee's decision must be approved by a simple majority of those present. The admissions committee will evaluate the candidates' abilities at a closed meeting and determines the order. The committee transfers the results of the admission procedure to the Dean of the faculty.
    c) A record must be made of the course and result of the admission procedure, which the members of the committee confirm by affixing their signatures.

Article 5

Decision on admission of the applicant to the studies and the option to file an appeal

1. Verification of the information stated in the documents from the applicant for admission to studies will be provided by the Student Affairs Office of the Faculty of Agriculture.
2. The Student Affairs Office of the USB Faculty of Agriculture bears responsibility for the preparation of materials necessary for the decision on the admission of an applicant to studies.
3. The Dean of the Faculty of Agriculture decides on the admission of an applicant to studies on the basis of the fact that the applicant meets the conditions for the admission of an applicant to studies and on the basis of the order set by the committee pursuant to Section 50(4) of the Act.
4. The decision of the dean of the Faculty of Agriculture on the admission or non-admission of the applicant to studies will be sent by the Student Affairs Office of the Faculty of Agriculture by 14 July 2022 at the latest. The applicant can also collect the decision in person at the Student Affairs Office. In the event of an extension of the deadline for submitting applications for

admission to studies pursuant to Article 3(2), the deadline for sending the letter with a decision on admission or non-admission to studies will be postponed accordingly.

5. If it is relevant (i.e. especially for applicants from abroad), the Rector's Ordinance R 450 on assessing the fulfilment of the condition of previous education of applicants for study, dated 18 November 2020, shall be applied when deciding on the admission of an applicant to studies.
6. In accordance with Section 50(5) 5 of the Act, the applicant has the right to inspect the materials that were the basis for the decision on his admission or non-admission to studies at the Student Affairs Office of the Faculty of Agriculture on 20 July 2022, or upon an agreement by phone.
7. The applicant may request the Dean of the faculty to review the decision. The request is to be submitted within 30 days from the date of its delivery. The Dean himself may grant the request and change the decision, otherwise, he forwards the request for a review to the Rector of the University of South Bohemia. The Rector is to change the Dean's decision if it was issued in violation of the law, the internal regulations of the University or the conditions set according to Section 49(1)(3) of the Act. Otherwise, the request is to be rejected and the original decision is to be confirmed.

Article 6
Conditions for the enrolment of applicants to studies

1. Applicants are to submit documents concerning successful completion of studies in a master's degree programme, or other original or officially verified documents, no later than on the day of enrolment.
2. Only those students who have been issued a decision on admission to study can enrol.
3. The transfer of students from other faculties of the University of South Bohemia in České Budějovice to doctoral degree programmes accredited at the Faculty of Agriculture is possible after the end of the first year at the earliest and only when following an individual study plan. The application is approved by the Dean of the faculty after a discussion in the corresponding doctoral studies board. The corresponding doctoral studies board sets bridging examinations and discusses and approves an adjusted individual study plan.

Article 7
Final Provisions

1. Rules for the admission procedure and the conditions for admission to studies in doctoral degree programmes starting in the academic year 2022/2023 were discussed and approved by the Academic Senate of the Faculty of Agriculture of the University of South Bohemia in České Budějovice.

doc. RNDr. Petr Bartoš, Ph.D., v. r.
Dean of the faculty

Annexe 1

Numbers of admitted students for the academic year 2022/2023

In accordance with Section 49(5) of Act No. 111/1998, on Higher Education Institutions, the highest number of accepted applicants is stated:

Degree programme	Number of applicants to be admitted
General plant production	20
Agricultural chemistry and biotechnology	20
General zootechnics	20
Agroecology and applied ecology *	20

* in the event that the accreditation is awarded, the Faculty of Agriculture will announce an admission procedure for the DDP Agroecology and applied ecology

Annexe 2

Proposed dissertation topics

Doctoral degree programme: General Plant Production

Programme guarantor: doc. Ing. Jan Bárta, Ph.D.

Place of training: Department of Plant Production
Department of Agroecosystem
Department of Applied Ecology
Department of Agricultural Machinery and Services

Framework topics	Supervisor
Isolation, characterization and modification of proteins and peptides from selected oilseed cakes	doc. Ing. Jan Bárta, Ph.D.
Processing of beetroot into flours, juices and pigment isolates	doc. Ing. Jan Bárta, Ph.D.
Evaluation of soybean (*Glycine max* L.) production from marginal regions of the Czech Republic	doc. Ing. Jan Bárta, Ph.D.
Application of artificial intelligence methods in plant production	doc. RNDr. Petr Bartoš, Ph.D.
Development of smart technologies with applications in plant production	doc. RNDr. Petr Bartoš, Ph.D.
Optimization of agricultural or transport machinery in plant production	doc. RNDr. Petr Bartoš, Ph.D.
Application of image processing methods in plant production	doc. RNDr. Petr Bartoš, Ph.D.
Study of virulence of Plasmodiophora brassicae pathotypes and identification of resistance genes to clubroot	prof. Ing. Vladislav Čurn, Ph.D.
Climate-Smart Plant Breeding – new approach for improvement of drought-tolerant crops	prof. Ing. Vladislav Čurn, Ph.D.
Molecular tools for fast and reliable identification of plant pathogens	prof. Ing. Vladislav Čurn, Ph.D.
Greenhouse gases emissions from selected crops growing within organic and conventional system of farming	doc. Ing. Jan Moudrý, Ph.D.
Decompression of agricultural soils and quality of soil organic matter as a means to increase water retention in the landscape	doc. Ing. Radka Váchalová, Ph.D.
Relation of primary organic matter and humus to labile, semi-labile and stable soil organic fraction in selected genetic soil types in the Czech Republic	doc. Ing. Radka Váchalová, Ph.D.
Humification accelerators and retardants in relation to current composting technologies	doc. Ing. Radka Váchalová, Ph.D.
Influence of application of selected improving substances on soil organic matter	doc. Ing. Petr Konvalina, Ph.D. (Ing. Marek Kopecký, Ph.D. – specialist supervisor)
Intensification of legumes production in organic farming	doc. Ing. Petr Konvalina, Ph.D.
Study of biological effects of common millet and possibilities of their utilization	doc. Ing. Jan Pexová Kalinová, Ph.D.
Impact of agricultural management on a surface water quality	doc. Ing. Jakub Brom, Ph.D.
Impact of agricultural management on hydrology of the catchments	doc. Ing. Jakub Brom, Ph.D.

Importance of crop rotation and soil erosion for radionuclides movement in the environment	doc. Ing. Jakub Brom, Ph.D.

All topics proposed for the Doctoral degree programme General plant production are suitable for foreign applicants.

Doctoral degree programme: Agricultural chemistry and biotechnology

Programme guarantor: doc. Ing. Roman Kubec, Ph.D.

Place of training: Department of Applied Chemistry
Department of Genetics and Agricultural Biotechnologies
Department of Quality of Agricultural Products and Food Biotechnologies

Framework topics	Supervisor
Biologically-active compounds in products of minibreweries	doc. Ing. Eva Dadáková, Ph.D.
Formation of biogenic amines in selected foodstuffs	prof. Ing. Martin Křížek, CSc.
Organosulfur secondary metabolites of alliaceous species	doc. Ing. Roman Kubec, Ph.D.
Study of undesirable changes of organoleptic properties during processing of alliaceous vegetables	doc. Ing. Roman Kubec, Ph.D.
Effect of gene polymorphisms on the quality of milk	prof. Ing. Jindřich Čítek, CSc.
Analysis of some loci of bovine inherited diseases	prof. Ing. Jindřich Čítek, CSc.
Analysis of some loci of swine – horse - dog inherited disease (will be specified according to the interest of the doctoral student)	prof. Ing. Jindřich Čítek, CSc.
Molecular identification of genetic resources of *Brassica* vegetables	prof. Ing. Vladislav Čurn, Ph.D.
Study of virulence of *Plasmodiophora brassicae* pathotypes and identification of resistance genes to clubroot	prof. Ing. Vladislav Čurn, Ph.D.
Study of gene expression and accumulation of stress proteins under conditions of abiotic stress	prof. Ing. Vladislav Čurn, Ph.D.
Molecular detection of genes potentially involved in the response to drought stress in rape and mustard	prof. Ing. Vladislav Čurn, Ph.D.
Development of molecular tools for improvement of drought tolerance in crops)	prof. Ing. Vladislav Čurn, Ph.D.
Molecular tools for fast and reliable identification of plant pathogens	prof. Ing. Vladislav Čurn, Ph.D.
Optimization of biotechnological process using nature-inspired global optimization method	doc. Ing. Michael Rost, Ph.D.
The use of the apparatus of functional data analysis in the evaluation of the influence of abiotic stress on the morphological characteristics of a selected crop	doc. Ing. Michael Rost, Ph.D.
Influence of drug residues in milk on fermentation processes	doc. MVDr. Lucie Hasoňová, Ph.D.
Influence of gene polymorphism of DGAT1, SCD1 and AGPAT6 on milk fatty acid composition in small ruminants	doc. Ing. Eva Samková, Ph.D.
Detection of natural inhibitors and contaminants in milk by various methods	doc. Ing. Eva Samková, Ph.D.
The effects of herbal extracts and other plant supplements on the quality of selected dairy products	doc. Ing. Eva Samková, Ph.D.
The influence of the technological process on selected qualitative properties of foods of plant and animal origin	doc. Ing. Eva Samková, Ph.D.
Evaluation of the presence of selected inhibitory substances on the technological properties of milk	doc. Ing. Eva Samková, Ph.D.
Enzyme hydrolysis of plant proteins and study of bioactive peptides	doc. Ing. Jan Bárta, Ph.D.

Foreign applicants for doctoral studies in the DDP Agricultural chemistry and biotechnology will consult the suitability of the chosen dissertation topic with the relevant supervisor.

Doctoral degree programme: General zootechnics

Programme guarantor: prof. Ing. Jindřich Čítek, CSc.

Place of training: Department of Zootechnical Sciences
Department of Genetics and Agricultural Biotechnologies
Department of Agricultural Machinery and Services

Framework topics	Supervisor
Analysis of some loci of bovine inherited diseases	prof. Ing. Jindřich Čítek, CSc.
Association analysis of candidate loci and breeding values in Holstein and Czech Simmental breeds	prof. Ing. Jindřich Čítek, CSc.
Association analysis of candidate loci and reproduction in cattle	prof. Ing. Jindřich Čítek, CSc.
Non-linear relationships among traits in milk cattle, assessment of genetic parameters and construction of selection indexes	prof. Ing. Jindřich Čítek, CSc. (prof. Ing. Josef Přibyl, DrSc., Ing. Ludmila Zavadilová, CSc. – supervisor specialist
Algorithms of genomic evaluation of farm animals using all information sources on individuals and genotypes	prof. Ing. Jindřich Čítek, CSc. (prof. Ing. Josef Přibyl, DrSc. – supervisor specialist)
Incorporation of international breeding values into the national genetic evaluation of beef cattle	prof. Ing. Jindřich Čítek, CSc. (Ing. Zdeňka Veselá, Ph.D., VÚŽV Praha – supervisor specialist
Genetic evaluation of beef sires for crossing with milk breeds	prof. Ing. Jindřich Čítek, CSc. (Ing. Zdeňka Veselá, Ph.D., VÚŽV Praha – supervisor specialist)
Genetic evaluation of carcass traits in beef cattle	prof. Ing. Jindřich Čítek, CSc. (Ing. Zdeňka Veselá, Ph.D., VÚŽV Praha - supervisor specialist
Analysis of relationship between longevity and disease in dairy cattle	prof. Ing. Jindřich Čítek, CSc. (Ing. Zdeňka Veselá, Ph.D., VÚŽV Praha – supervisor specialist
Genetic polymorphisms of functional molecules of immune system of small ruminants and its influence on the susceptibility to some infections	prof. Ing. Jindřich Čítek, CSc. (Dr. Ing. Jitka Kyselová, VÚŽV Praha - supervisor specialist
Evaluation of genetic parameters for milk performance of goats	prof. Ing. Jindřich Čítek, CSc. (Ing. Michaela Brzáková, Ph.D., VÚŽV Praha – supervisor specialist
Influence of genetic polymorphisms on the milk performance of goats	prof. Ing. Jindřich Čítek, CSc. Ing. Michaela Brzáková, Ph.D., VÚŽV Praha – supervisor specialist
Evaluation of genetic parameters of reproduction in goats	prof. Ing. Jindřich Čítek, CSc. Ing. Michaela Brzáková, Ph.D., VÚŽV Praha – supervisor specialist
Influence of udder proportions on the goat´s milk performance and reproduction (linear description)	prof. Ing. Jindřich Čítek, CSc. Ing. Michaela Brzáková, Ph.D., VÚŽV Praha – supervisor specialist

Framework topics	Supervisor
Detection of natural inhibitors and contaminants in milk by various methods	doc. Ing. Eva Samková, Ph.D.
Colostrum quality regarding selected biological and environmental factors	doc. MVDr. Lucie Hasoňová, Ph.D.
Use of functional data analysis in monitoring growth changes in beef breeds of cattle	doc. Ing. Michael Rost, Ph.D.
Modelling the relationship between qualitative parameters of meat (milk), health status and breeding technology through Bayesian networks	doc. Ing. Michael Rost, Ph.D.
Economic evaluation of applied procedures of preventive medicine in a dairy herd	doc. Ing. Mojmír Vacek, CSc. Ing. Jan Syrůček, Ph.D., VÚŽV-supervisor specialist
Cow comfort assessment using image processing	doc. Ing. Mojmír Vacek, CSc.
Analysis of the effects of stable environment, management and herd bacteriological profile on the success of selective drying of dairy cows	doc. Ing. Mojmír Vacek, CSc. Ing. Vojtěch Zink, Ph.D. – supervisor specialist
Use of computer simulations in the design and optimization of stable technologies	doc. RNDr. Petr Bartoš, Ph.D.
Advanced computational methods and their applications in technologies in livestock breeding	doc. RNDr. Petr Bartoš, Ph.D.
Evaluation of breeding parameters by application of machine vision methods	doc. RNDr. Petr Bartoš, Ph.D.
Best Available Technologies (BAT) in livestock production	doc. RNDr. Petr Bartoš, Ph.D.
Reproduction of gilts and sows using biotechnological methods (hormonal synchronization of estrus, postcervical insemination)	doc. Ing. Naděžda Kernerová, Ph.D.
Effect of grain thermic treatment on the nutrients availability in rumen	doc. Ing. František Lád, CSc. Ing. Petra Kubelková, Ph.D., VUŽV Pohořelice – supervisor specialist
Nutrition value of different crops in relation to the growth stage and way of conservation	doc. Ing. František Lád, CSc. Ing. Filip Jančík, Ph.D. (VUŽV Pohořelice) – supervisor specialist
The study of host-mediated transmission of microsporidia into the inflammation centre	prof. Ing. Martin Kváč, Ph.D.
The pathogenicity of cryptosporidia colonizing different parts of host´s digestive tract	prof. Ing. Martin Kváč, Ph.D.
Wild and domesticated artiodactyls as hosts of important parasitic infections	prof. Ing. Martin Kváč, Ph.D.
Metabolic status of dairy cows with different levels of inhibitory substances in milk	prof. Ing. Jan Trávníček, CSc.
Milk iodine content in dairy cows with different management systems	prof. Ing. Jan Trávníček, CSc. Ing. Michaela Horčičková, Ph.D. – supervisor specialist
Effect of functional load on metabolic and immune status of animals	prof. Ing. Jan Trávníček, CSc. Ing. Michaela Horčičková, Ph.D. – supervisor specialist
The effect of bisphenol on selected morphological and functional parameters of experimental animals	doc. Ing. Roman Konečný, Ph.D.
Morphological and functional changes in organs of experimental animals infected with cryptosporidia	doc. Ing. Roman Konečný, Ph.D.

Framework topics	Supervisor
The influence of the level of livestock management and prevention of diseases, including biosecurity, on the reduction of antimicrobials usage and the spread of antimicrobial resistance	prof. Ing. Miloslav Šoch, CSc.
Increasing the efficiency, productivity and competitiveness of pig, improvement of welfare	prof. Ing. Miloslav Šoch, CSc.
Analysis of the level of biosecurity and welfare of animals	prof. Ing. Miloslav Šoch, CSc.
Influence of the increasing occurrence of heat stress in the Czech Republic on dairy cows in terms of the quantity and quality of milk production	prof. Ing. Miloslav Šoch, CSc.
Utilization of probiotic properties of microbial agents in poultry farming with regard to health status, viability, ecological aspects and biosecurity	prof. Ing. Miloslav Šoch, CSc.
Using of natural biologically active substances in Tribulus terrestris with physiological effects for the qualitative influencing of the reproduction cycle process in animal husbandry and reduction of environmental load with hormonal substance	prof. Ing. Miloslav Šoch, CSc.
Using fistulated high-production dairy cows to specify the usability and digestibility of feed by the in sacco method	prof. Ing. Miloslav Šoch, CSc.
Improving milk quality and its economic indicators by using an automated system for monitoring selected parameters in real time	prof. Ing. Miloslav Šoch, CSc.
Effect of the presence of parasitic infection on the blood count and its seasonal dynamics in case of sheep farmed in sub-alpine conditions	prof. Ing. Miloslav Šoch, CSc.
Bioclimatological influences of the environment and technological procedures in relation to animal welfare and to quality of products in the food chain	prof. Ing. Miloslav Šoch, CSc.
Reducing the application of antibiotics by using environmentally friendly prebiotic and probiotic feeding additives in calf nutrition	prof. Ing. Miloslav Šoch, CSc.
Environmentally friendly technologies for sustainable agricultural development	prof. Ing. Miloslav Šoch, CSc.

All topics proposed for the Doctoral degree programme General zootechnics are suitable for foreign applicants.

Doctoral degree programme: Agroecology and Applied Ecology

Programme guarantor: prof. RNDr. Hana Čížková, CSc

Place of training: Department of Agroecosystems
Department of Biological Disciplines
Department of Applied Ecology
Department of Plant Production

Framework topics	Supervisor
Limits on the use of data on trade in endangered species of plants and animals in the CITES Trade Database	doc. Mgr. Michal Berec, Ph.D.
Effect of predator on life history characteristics of prey: an experimental approach	doc. Mgr. Michal Berec, Ph.D.
Spectral properties of the aquatic environment as related to phytoplankton content	doc. Ing. Jakub Brom, Ph.D.
Application of the methods of remote sensing in hydrobiology	doc. Ing. Jakub Brom, Ph.D.
Hydrological and hydrochemical conditions in small catchments with different land cover	doc. Ing. Jakub Brom, Ph.D.
Greenhouse gases emissions from selected crops cultivated in organic and conventional systems of farming	doc. Ing. Jan Moudrý, Ph.D.
Short supply chain and Farm to fork strategy potential within food production with relation to the public catering	doc. Ing. Jan Moudrý, Ph.D.
Study of the influence of crop rotation and cultivation technologies on allelopathic activity and physiological characteristics of sorghum	doc. Ing Jana Pexová Kalinová, Ph.D.
Colonization of newly established agrocenoses by the common vole (*Microtus arvalis*)	prof. RNDr. František Sedláček, CSc.
Diversification and support of the development of natural food in commercial fish production	doc. RNDr. Irena Šetlíková, Ph.D.

Topics for the DDP Agroecology and applied ecology highlighted in bold are suitable for foreign applicants.