



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

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### **Dean's Ordinance announcing the rules for the admission procedures and the conditions of admission to studies in bachelor's and consecutive master's 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 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 Sections 58(1) of Act No 111/1998, on Higher Education Institutions (hereinafter as the 'Act') and Articles 18 and 22 of the Statutes of the University of South Bohemia in České Budějovice (hereinafter as the 'Statutes').

#### Article 2

##### **Degree programmes accredited at the USB Faculty of Agriculture receiving applications for admission to studies**

1. Students can submit applications for admission to studies in the following bachelor's programmes:
  - Agroecology
  - Agribusiness
  - Biology and Conservation of 'Hobby' Organisms
  - Landscaping and Real Estate Trade
  - Agriculture
  - Agricultural Biotechnology
  - Animal Husbandry
  - Agricultural machinery and technology
2. Students can submit applications for admission to studies in the consecutive master's degree programmes:
  - Agroecology



- Biology and Conservation of 'Hobby' Organisms
  - Quality and processing of agricultural products
  - Agricultural machinery and technology
  - Agricultural Biotechnology
  - Animal Husbandry
  - Multifunctional Agriculture.
3. In the case that the accreditation is granted, the USB Faculty of Agriculture will open the admissions to the consecutive master's degree programmes:
- Agribusiness
  - Land Adjustment and Real Estate Trade
  - Agricultural Engineering

### Article 3

#### **Rules for submitting and processing study applications**

1. Applications for studies are submitted only via 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 for admission to studies in bachelor's degree programmes is obliged to attach a scanned (photographed) copy (.pdf or .jpg formats) of the catalogue sheet confirmed by the secondary school, or a certificate from the 2nd semester of each individual year of study at a secondary school (in the case of incomplete studies, the 1st semester certificate of the 4th year) and the high school-leaving certificate (if the applicant has already passed the school-leaving examination) to the electronic application. The attached copies must be of sufficient quality so that all the data are clear. If the applicant does not have the option to attach these copies to the application electronically, he will send them by post together with the signed application printed from the electronic portal.
3. Applicants applying for admission to the consecutive master's studies are to submit the application only in electronic form.
4. Applicants are required to pay the fee set pursuant to Section 58(1) of the Act and Article 18 of the Statutes by the set deadline (by 31 March 2022). Applicants prove having paid the fee by providing evidence of the payment. Applicants who do not pay the fee even after a call reminding them to do so will not meet the basic condition for inclusion in the admission procedure.
5. Applicants who are graduates of a foreign secondary school or university are to attach other mandatory annexes referred to in Article 9 to the application.
6. Applications for admission to studies will be included among the submitted ones only after the USB Faculty of Agriculture receives the electronic application with all the requisites and required attachments. An incomplete application will be considered invalid and will not be included in the admission procedure.



#### Article 4

#### **Admission examinations**

1. Applicants for admission to studies in bachelor's degree programmes are admitted without having to undergo admission examinations.
2. Applicants for admission to studies in consecutive master's degree programmes who are graduates of the Faculty of Agriculture of the University of South Bohemia in České Budějovice and whose chosen consecutive master's degree programme follows the bachelor's degree programme they completed are admitted without having to undergo admission examinations.
3. Applicants for the Consecutive master's degree programme Quality and Processing of Agricultural Products, who are graduates of the bachelor's degree programmes Agribusiness, Agroecology, Agriculture, Agricultural Biotechnology and Zootechnics at the Faculty of Agriculture of the University of South Bohemia in České Budějovice are admitted without having to undergo admission examinations.
4. Applicants for admission to the Consecutive master's degree programme Multifunctional Agriculture, which is taught in English, are admitted without having to undergo admission examinations.
5. Other applicants for admission to studies in consecutive master's degree programmes are to undergo admission examination unless the Dean of the faculty decides otherwise.
6. The admission examinations for consecutive master's degree programmes will take place on 21 June 2022.
7. The alternative date for the admission examinations for consecutive master's degree programmes is 27 June 2022.
8. The exact time of the admission examination will be communicated to each applicant in writing, including other information about the examination. The acceptance of the application for admission to studies will also be confirmed by the Faculty of Agriculture to the applicants in writing.
9. The alternative date of the admission examination is equivalent to the regular date, but it is intended only for those candidates who could not attend the regular date due to serious health and other reasons (substantiated by a relevant confirmation) and if they request it within 5 days after the regular date. The candidate's health indisposition must be proven by a medical certificate. The significance of other reasons will be assessed by the Dean of the faculty.
10. Participation in admission exams at another university is not a reason to excuse the applicant from attending the regular date of the admission examination.
11. Admission examinations for consecutive degree programmes (or study fields) take place in the written form. The parts of the test and their framework content are defined in the annexes to this measure.

#### Article 5

#### **Admission examination waivers**

1. The Dean of the faculty will waive the entrance exam for applicants who have already studied at the Faculty of Agriculture of the University of South Bohemia in České Budějovice in the same or a related degree programme (or study field) and terminated their studies on grounds other than school results.



#### Article 6

##### **Admission examination evaluation committees**

1. The Dean of the faculty nominates the main admissions committee, a three-member admissions committee appointed for each degree programme and an evaluation committee for each degree programme.
2. The evaluation committee is responsible for evaluating the results of the written admission examinations, which is conducted in private and anonymously.
3. The admissions committee appointed for each degree programme determines the overall results of the admission procedure for each applicant and compiles the order of applicants for each degree programme.
4. The main admissions committee will prepare a proposal on the admission or non-admission of the applicant to studies.

#### Article 7

##### **Evaluation and admission of applicants for bachelor's degree programmes**

1. The following applicants will be admitted to studies in bachelor's degree programmes:
  - a. Applicants who graduated from a secondary school and successfully passed the school-leaving examination and demonstrated this fact by providing a high school-leaving certificate or its certified copy.
  - b. Applicants whose placement in the order of all applicants is equal to or higher than the number of applicants admitted to studies in the given degree programme. The expected numbers of admitted candidates are outlined in the annexes to this ordinance.
2. The condition according to (a) may also be met by graduates of a foreign secondary school if this fact is proved by a recognised final examination document equivalent to the school-leaving examination.
3. The order of applicants for admission to studies in bachelor's degree programmes is determined on the basis of the results of the entire studies at the secondary school (without taking into account the results of the leaving exam).

#### Article 8

##### **Evaluation and admission of applicants for consecutive master's degree programmes**

1. The following applicants will be admitted to studies in consecutive master's degree programmes:
  - a. Applicants who graduated from bachelor's degree studies and provided a bachelor's diploma or its certified copy as evidence of this fact.
  - b. Applicants whose placement in the order of all applicants is equal to or higher than the number of applicants admitted to studies in the given degree programme. The expected numbers of admitted candidates are given in annexes to this ordinance.



2. The condition according to (a) may also be met by a graduate of a foreign university if this fact is proved by a recognised final state exam document equivalent to the award of a bachelor's degree at a university in the Czech Republic.
3. The result of the entrance exam is evaluated on a scale of 0 (the worst result) to 100 (the best result) points. Based on this evaluation, the order of applicants for admission to studies is determined.
4. Applicants for admission to studies in a consecutive degree programme, which were accepted by this ordinance without having to undergo admission examinations, or for whom the requirement was waived by the Dean of the faculty, are to receive the full number of points.
5. Applicants who do not undergo the admission examination on the regular or alternative date is awarded 0 points.

#### Article 9

##### **Specific conditions for foreign graduates**

1. The abovementioned conditions are applied appropriately for the admission of foreigners to studies within the framework of international agreements by which the Czech Republic is bound, with possible amendments, especially the deadlines of the admission procedure, the method of verifying the knowledge of the Czech language, and the recognition of the education achieved.
2. The conditions for the assessment of foreign secondary and higher education within the admission procedure for the academic year 2022/2023 are set by the Rector's Ordinance assessing compliance with the requirement of prior education of applicants for admission to studies No R 450 issued on 18 November 2020.
3. Additionally, graduates of a foreign secondary school who are applying for admission to studies in a bachelor's degree programme are to submit the following documents to the application, which constitute its compulsory attachments:
  - a. the original or an officially certified copy of the certificate/study results for all years of secondary education in accordance with the secondary education system of the country in question. If these documents are issued in states where the Apostille Convention applies, they must be provided with this so-called Apostille. If they are issued in countries where the Apostille Convention does not apply or an exemption from verification has not been agreed in a bilateral international legal aid agreement, they must be provided with a so-called superlegalization clause. These documents, including the Apostille or the Superlegalization Clause, must be translated into Czech by a court interpreter, and this translation must be submitted in the original or an officially certified copy;
  - b. the original or an officially certified copy of the proof of a successfully passed Czech language exam at an accredited institution being at least at the B1 level of the Common European Framework of Reference (CEFR).
4. Additionally, graduates of a foreign university who are applying for admission to studies in a consecutive master's degree programme are to submit the following documents to the application, which constitute its compulsory attachments:



- a. a recognised state final examination document equivalent to the award of a bachelor's degree at a university in the Czech Republic or its certified copy;
  - b. the original or an officially certified copy of proof of a successfully passed Czech language exam at an accredited institution proving that the level of knowledge of at least the B1 level of the Common European Framework of Reference (CEFR). This requirement does not apply to applicants for admission to the Consecutive master's degree programme Multifunctional Agriculture, which is taught in English.
5. The Faculty of Agriculture may insist on the recognition of education or request other original or officially verified documents during the admission procedure that would eliminate any doubt:
- a. additional information on the content and scope of foreign secondary or higher education;
  - b. additional information proving that the degree programme was executed by an institution authorised to provide education comparable to secondary or tertiary education pursuant to the Education Act;
  - c. confirmation of the relevant foreign high school or university or other relevant foreign institution (e.g. the Ministry of Education) that the graduate of the secondary or higher education programme of the secondary school or university concerned is entitled to applying for admission to a bachelor's, master's, or doctoral degree programme in the given foreign state.

#### Article 10

##### **Applicants with special needs**

1. Applicants with special needs (disabilities, chronic illnesses, other health problems) have the right to use the support measures and services provided by the University of South Bohemia in České Budějovice during admission examinations and, if admitted to studies, also during their studies. In order to claim this right, applicants must select 'YES' in the 'Taking into account specific needs' column in the electronic application.
2. After meeting all the administrative requirements associated with the submission of the application for admission to studies, applicants with special needs will be contacted by the Support Centre for Students with Special Needs of the University of South Bohemia. The staff of the centre will agree on the next steps with the applicant. More detailed information can be obtained on the website ([www.centrumssp.jcu.cz](http://www.centrumssp.jcu.cz)), by e-mail ([centrumssp@jcu.cz](mailto:centrumssp@jcu.cz)) or by phone (389 036 026). It is also possible to consult with the staff of the centre about the suitability of the degree programme choice before submitting the application for admission to studies.

#### Article 11

##### **Inspection of materials and admission procedure reviews**

1. Pursuant to Section 50(5) of the Act, applicants have the right to inspect his/her materials, which are important for the decision on his/her admission to studies, at the Student Affairs



Department of the Faculty of Agriculture of the University of South Bohemia on 20 July 2022 from 8:00 to 11:00.

2. The applicant has the right to ask the Rector to review the decision on admission/non-admission to studies. The request is to be submitted within 30 days of the decision delivery. The Rector shall amend such Dean's decisions, which were issued in violation of the law, the internal regulations of the University or the conditions set pursuant to Section 49(1)(3) of the Act. Otherwise, the request is to be rejected and the Dean's original decision is to be confirmed.

#### Article 12 Final provisions

1. In the cases that are not addressed by this ordinance, a final decision will be made by the Dean of the Faculty of Agriculture of the University of South Bohemia.
2. Students of the University of South Bohemia and other universities enrolling in any consecutive master's degree programmes of the Faculty of Agriculture and who have not completed English courses during their bachelor's studies at the Faculty of Agriculture within the scope of teaching AJ1, AJ2, AJ3, are required to achieve the required proficiency in the English language to this extent during their consecutive studies or to demonstrate equivalent knowledge.
3. This ordinance was 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: Parts of admission examinations for consecutive master's degree programmes**

Degree programme: **Quality and processing of agricultural products**

Exams parts: a) quality of plant products,  
b) quality of animal products.

Degree programme: **Agricultural machinery and technologies**

Exams parts: a) principles of agricultural machinery,  
b) principles of transport and handling machinery.

Degree programme: **Agricultural biotechnologies**

Exams parts: a) plant and animal biotechnologies,  
b) cell and molecular biology.

Degree programme: **Agroecology**

Exams parts: a) applied ecology,  
b) principles of agricultural production.

Degree programme: **Biology and conservation of 'hobby' organisms**

Exams parts: a) botanics,  
b) zoology.

Degree programme: **Zootechnics**

Exams parts: a) principles of animal husbandry I,  
b) principles of animal husbandry II.

Degree programme: **Landscaping and real estate transfers\***

Exams parts: a) landscaping,  
b) law.





Degree programme: **Agribusiness\***

Exams parts: a) principles of agricultural production,  
b) economy and management.

Degree programme: **Agricultural engineering\***

Exams parts: a) growing plants,  
b) animal husbandry.

**\* in the event that the accreditation is awarded, the Faculty of Agriculture will announce an admission procedure for the consecutive master's degree programme**

## **Annexe 2: Thematic topics for examination parts**

### **APPLIED ECOLOGY**

1. Ecosystem and agroecosystem in terms of input and output function:  
inputs to the ecosystem (energy, water, anorganic and organic substances),  
outputs from the ecosystem (primary production, biomass, efficiency,  
waste substances).
2. Flows of substances and energy in agroecosystem:  
flows of energy in ecosystem (input, output, production, efficiency, food  
nets and flow of energy),  
flows of substances in ecosystem (biogeochemical cycles, water cycle, flows  
of substances in the food network)
3. Biodiversity:  
basic characteristic a classification, protection and its preservation.
4. Relationships between organisms:  
competition - intraspecific x interspecific, predation, parasitism, herbivory,  
mutualism, symbiosis.
5. Sustainable management systems:  
principles.
6. Regional systems of ecological stability:  
formation, structure (biocentre, biocoridor, interaction element),  
importance.
7. Edafon in soil:  
classification, function and importance for soil fertility.
8. Bioindicators:  
characteristic, importance for the sustainability evaluation.
9. Environmentally valuable territories:  
specification, importance, principles of management.
10. Conventional, integrated and ecological agriculture:  
economical principles, mutual differences, evaluation of the influence



on the environment.

#### Literature:

1. Barták, M.: Ekologie řízených autotrofních organismů. ČZU, Praha, 2002.
2. Begon, M., Harper, J. L., Townsend, C. R., Grygová, B., Köberleová, B.: Ekologie: jedinci, populace a společenstva. 1. vyd. Olomouc: Vydavatelství Univerzity Palackého Olomouc, 1997. ISBN 80-7067-695-7.
3. Keller, J.: Až na dno blahobytu. EkoCentrum Brno, 1993.
4. Kendr J.: Teoretické a praktické aspekty ekologie krajiny. MŽP ČR, Enigma s.r.o., Praha, 2000.
5. Kolář, F., Matějů, J., Lučanová, M., Chlumská, Z., Černá, K., Prach, J., Baláž, V., Falteisek, L.: Ochrana přírody z pohledu biologa: proč a jak chránit českou přírodu. První vydání v českém jazyce. Dokořán, Praha, 2012. ISBN 978-80-7363-414-8.
6. Kovář, P.: Krajinná ekologie. Učební texty Univerzity Karlovy, Karolinum, UK Praha, 2008.
7. Lomborg, B.: Krajinný ráz. Praha, 2003.
8. Míchal, I.: Ekologická stabilita. MŽP ČR, Praha, 1994.
9. Moldan, B.: (Ne)udržitelný rozvoj ekologie, hrozba a naděje. Karolinum, Praha, 2001.
10. Moldan, B.: Podmaněná planeta. Karolinum, Praha, 2009.
11. Nátr, L.: Rozvoj trvale neudržitelný. Nakladatelství Karolinum, Praha, 2005.
12. Pivnička, K.: Aplikovaná ekologie: dlouhodobá udržitelnost rybářské, zemědělské a lesnické produkce. Univerzita Karlova v Praze, 2002. ISBN 80-246-0599-6.
13. Rajchard, J.: Ekologie III: Struktura a funkce ekosystému, produkční ekologie, biogeochemické cykly, chemické faktory prostředí, základy ekologie půdy, ekologie vodního prostředí, aktuální celosvětové ekologické problémy. 1. vyd., KOPP, Č. Budějovice, 2002. ISBN 80-7232-191-9.
14. Rajchard, J., Balounová, Z., Vysloužil, D. Ekologie I.: Pojem a obsah ekologie, globální prostředí planety a jeho členění, ekologické faktory, působení fyzikálních faktorů na organizmy. 1. vyd., Kopp, Č. Budějovice, 2002. ISBN 80-7232-189-7.
15. Rajchard, J., Balounová, Z.: Základy ekologie I. Ekologie vodního prostředí a zoocenologie: (terénní cvičení). 1. vyd., ZF JU, Č. Budějovice, 1996. ISBN 80-7040-160-5.
16. Rajchard, J., Kindlmann, P., Balounová, Z.: Ekologie II. Biotické faktory - populace, základní modely populační dynamiky, společenstva, potravní řetězce. 1. vyd., KOPP, Č. Budějovice, 2002. ISBN 80-7232-190-0.
17. Storch, D., Mihulka, S.: Úvod do současné ekologie. Vydání první. Portál, Praha, 2000. ISBN 80-7178-462-1.
18. Šarapatka, B. a kol.: Agroekologie. Východiska pro udržitelné zemědělské hospodaření. Bioinstitut, Olomouc, 2010.
19. Šarapatka, B., Niggli, U.: Zemědělství a krajina, cesty k vzájemnému souladu. UP Olomouc, 2008.
20. Townsend, C. R., Begon, M., Harper, J. L.: Základy ekologie. 1. české vyd., Univerzita Palackého v Olomouci, 2010. ISBN 978-80-244-2478-1.

#### Written in English:

1. Townsend, C. R.: Ecological applications: toward a sustainable world. 1st ed. Malden: Blackwell, 2008. ISBN 978-1-4051-3698-3.
2. Carpenter, S. R.: Ecosystems and human well-being: scenarios. Vol. 2. 1st ed. Washington: Island Press, 2005. ISBN 1-55963-390-5.



3. Molles, M. C.: Ecology: concepts and applications. 2nd ed. Boston; New York: McGraw-Hill, 2002. ISBN 0-07-029416-X.
4. Altieri, M. A.: Agroecology: the science of sustainable agriculture. 2. ed. Boulder, Colo.: Westview, 1995. ISBN 0-8133-1718-5.



## PRINCIPLES OF AGRICULTURAL PRODUCTION

### Plant production:

1. Soil fertility, physical and chemical properties of soil and their influence on processing.
2. Significant weeds in cereals, other grains and root crops and methods of their regulation.
3. Basic and pre-sowing tillage (importance, technology, crop suitability).
4. Nutrition and fertilization of cereals, their importance for yield production.
5. Crop rotation in sowing procedures. The importance of agrobiodiversity for performance, plant health and quality of production.
6. Principles of growing cereals (establishment of vegetation, agrotechnical interventions during vegetation, protection against diseases and pests).
7. Principles of growing root crops (establishment of vegetation, agrotechnical interventions during vegetation, protection against diseases and pests).
8. Principles of growing oilseeds and legumes (establishment of vegetation, agrotechnical interventions during vegetation, protection against diseases and pests).
9. Harvesting and post-harvest treatment of field crops (ripeness phase, harvesting technology, cleaning and drying of grains and sorting and storage of root crops).
10. Basic parameters of nutritional and technological quality of the main harvested crop products.

### Animal production:

1. Importance and perspectives of cattle breeding (principles of milk and meat yield).
2. Use of beef cattle breeds.
3. Principles of pork production - production indicators, meat quality.
4. Application of poultry in food production.
5. Use of horses in today's society - working, medical, sport, social.
6. Production and non-production application of sheep in the Czech Republic.
7. Fertility of farm animals and its assumptions.
8. Ethics of animal husbandry - importance, principles, legislation.

### Literature:

Diviš, J. a kol.: Pěstování rostlin. ZF JU, České Budějovice, 2000.

Odkaz na stažení: <http://rv.zf.jcu.cz/wp-content/uploads/2019/11/Pestovani-rostlin-ZF-JU-ucebni-texty.pdf>

Šarapatka, B., Urban, J. a kol.: Ekologické zemědělství v praxi. Pro-bio Šumperk, 2007.

Frelích, J. a kol.: Chov hospodářských zvířat I. ZF JU, České Budějovice, 2011.

Matoušek, V. a kol.: Chov hospodářských zvířat II. ZF JU, České Budějovice, 2013.



## ECONOMICS AND MANAGEMENT

### **Economics:**

1. Consumer behavior and demand formation. Company behavior and offer formation.
2. Perfect and imperfect competition.
3. Markets of production factors.
4. Economic balance and its models, classical, Keynesian and neoclassical.
5. Economic growth, economic power and level, coefficient and growth rate, nominal and real GDP.
6. Price level, absolute and relative prices, forms and consequences of inflation, slumpflation and stagflation.
7. Unemployment and its types, unemployment rate and natural unemployment rate.
8. State budget, its incomes and expenses, state budget instruments.
9. Monetary policy, its tools. Money, forms of money and their historical development, monetary aggregates.

### **Management (Management and marketing):**

1. Definition of basic concepts of management.
2. The concept of strategic management, vision, mission, goals and strategies, analyses of the company environment, formulation and implementation of strategy.
3. Importance and function of the company organization, organizational structure, its types, formal and informal organizations.
4. Methods and styles of management, theoretical approaches to the style of managerial work, leadership, power, teamwork, participation in management.
5. Theory of making decision. Process of making decision. Subjective and objective methods of decision making.
6. Definition of the concept of corporate culture, elements and levels of corporate culture.
7. Concept and function of control, phases of the control process.
8. The importance of marketing for the company and society.
9. The model of consumer and organization behavior. Marketing mix tools, their use and resources.



## QUALITY OF AGRICULTURAL (PLANT AND ANIMAL) PRODUCTS

1. Quality - concepts, evaluation and quality control.
2. Nutrients (fats, proteins, carbohydrates, fiber) - basic building blocks, content of the main plant and animal products, importance.
3. Vitamins and mineral substances.
4. Composition of cereals (wheat, barley, rye), basic qualitative indicators, treatment and storage.
5. Composition of oilseeds (rape, soybeans, sunflowers), basic qualitative indicators, important varieties and storage.
6. Composition of potatoes, basic qualitative indicators, important varieties and storage.
7. Importance of cereals, oilseeds and root crops in food production.
8. Meat sources, production and consumption in the Czech Republic, meat composition and basic qualitative indicators.
9. Sorts of milk, production and consumption in the Czech Republic, milk composition and basic qualitative indicators.
10. Structure and composition of eggs, basic quality indicators.
11. Importance of meat, milk and eggs in food production.
12. Classification of microorganisms (according to temperature, relation to oxygen,...).
13. Basic conditions of growth of microorganisms.
14. Quality management - state supervision of food, supervisory authorities.
15. Basic structure of European and national legislation related to the quality of products - hygiene package and food hygiene.

### Literature:

- eAGRI (2020): *Hygiena potravin*. [online]. Ministerstvo zemědělství ČR: © 2009-2020 [cit. 16.11.2020]. Dostupné na: <http://eagri.cz/public/web/mze/potravin/hygiena-potravin-a-hacp/>
- Kadlec, P. a kol.: *Technologie potravin. Přehled tradičních potravinářských výrob*. KEY Publishing, 2012
- Prugar, J. a kol.: *Kvalita rostlinných produktů na prahu 3. tisíciletí*. Praha: Výzkumný ústav pivovarský a sladařský 2008, 327 s. ISBN 978-80-86576-28-2.
- Samková, E. a kol.: *Kvalita vybraných zemědělských produktů – složení a požadavky na jakost*. [online]. České Budějovice: JU ZF, 2020. Dostupné na: <http://kkzp.zf.jcu.cz/>



## PRINCIPLES OF AGRICULTURAL MACHINERY PRINCIPLES OF TRANSPORT AND HANDLING MACHINERY

### Principles of agricultural machinery

1. Principles of technical systems
2. Tillage machines
3. Machines for fertilization and plant protection
4. Machines for cereals and fodder
5. Machines for root crops, technical crops and vegetables
6. Machines for soil and forest works
7. Machines for animal production

### Principles of transport and handling machinery

1. Principles of technical systems
2. Transport and handling technology
3. Tractors and means of transport
4. Workshop machines and tools

### Literature:

- Svatoš, J., Frolík, J.: Základy zemědělské techniky I. ZF JU, České Budějovice, 2000. ISBN 80-7040-464-7;
- Svatoš, J., Frolík, J.: Základy zemědělské techniky II. ZF, České Budějovice, 1997. ISBN 80-7040-243-1.
- Kumhála, F.: Zemědělská technika; stroje a technologie pro rostlinnou výrobu. ČZU, Praha 2008. ISBN 978-80-213-1701-7.
- Červinka, J.: Mechanizace rostlinné výroby. VŠZ AF, Brno, 1993. ISBN 80-7157-085-0.
- Trunečka, K.: Technika a metody v ochraně rostlin I. MZLU, Brno, 1996. ISBN 80-7157-1962-2.
- Břečka, J.: Stroje pro sklizeň píce a obilovin. ČZU, Praha, 2001. ISBN 80-213-0738-2.
- Celjak, I.: Strojní zařízení pro realizaci stavebních prací. ZF JU, České Budějovice, 2009, 133 s.
- Celjak, I.: Stroje pro zemní a lesní práce II. ZF JU, České Budějovice, 2000, 195 s.
- Kic, P.: Dopravní a manipulační stroje I., Základy logistiky. ČZU, Praha 2008. 44 s.;
- Syrový, O. a kol.: Doprava a manipulace v zemědělství, Profi Press, Praha, 2008, 248 s.
- Bauer, F., Sedlák, P.: Traktory. Profi Press, Praha, 2006.
- Jerie, J.: Teorie motorů. ČVUT, Praha, 1996. ISBN 80-01-01460-6.
- Abrahám, Z. a kol.: Technické a technologické normativy pro zemědělskou výrobu. VÚZT v.v.i. Praha, 2007
- Andrt, M.: Technika a technologie pro chov zvířat. Reprografické studio PEF, ČZU, Praha, 2011, 100 s.
- Gálik, R. a kol.: Technika pre chov zvierat. Vysokoškolská učebnice, SPU v Nitre, 2018. ISBN 978-80-552-1906-6.



## PLANT AND ANIMAL BIOTECHNOLOGIES CELL AND MOLECULAR BIOLOGY

1. Anatomy and morphology of plant cells and tissues.
2. Genetic and cytogenetic structure of plant tissues.
3. Differentiation processes during growth and development of plants.
4. Basic regeneration processes in plants and plant cells.
5. Techniques of plant cells cultivation in vitro.
6. Basic principles of plant breeding.
7. Principles of molecular genetics.
8. Genetic processes at the level of cells and individuals.
9. Principles of genetics of livestock populations.
10. Genetics of performance properties of livestock.
11. Principles of livestock breeding.

### Literature:

- Jelínek, J., Zicháček, V.: Biologie pro gymnázia. Olomouc, 2014.  
Závodská, R.: Biologie buněk, Scientia, 2006.  
Kočárek, E.: Genetika. Scientia, 2005.  
Campbell, N. A., Reece, J. B.: Biologie. Computer Press, 2009.  
Snustad, D. P., Simmons, M. J.: Genetika. MUNI PRESS, 2018.  
Relichová, J.: Genetika populací. MUNI PRESS, 2014.  
Řehout, V. a kol.: Genetika I a II. ZF JU, České Budějovice, 2000, 2005.  
Novák, F. J: Rostlinné explantáty. JU, 2000.  
Lesk, A.: Introduction to Genomics. Oxford Univ. Press. 2017.  
Samuelsson, T.: Genomics and Bioinformatics. Cambridge: Cambridge University Press, 2012.  
Ruvinsky, A., Marshall, G. J. A. (eds.): Mammalian Genomics. Wallingford, Cambridge, CABI Publishing 2005.





## PRINCIPLES OF ANIMAL HUSBANDRY I and II

### Principles of animal husbandry I

1. Importance and perspectives of cattle breeding.
2. Economics of cattle breeding.
3. Technics of diary cattle breeding.
4. Milk production.
5. Beef production.
6. Technique of cow breeding without market milk production.
7. Importance and perspectives of horse breeding.
8. Evaluation of the appearance and performance of horses.
9. Economics of horse breeding.
10. Economic importance of goat breeding, dairy and meat efficiency.
11. Economic importance of sheep breeding, dairy and meat efficiency.

### Principles of animal husbandry II

1. Importance of pig breeding and its perspectives.
2. Utility types of pigs and their application.
3. Reproductive properties of pigs.
4. Fattening and carcass value of pigs.
5. Principles of pig breeding (piglets, sows, boars).
6. Pig breeding technique.
7. Importance of poultry farming and its perspectives.
8. Production of table eggs.
9. Poultry meat production.
10. Waterfowl and its application.
11. Principles of rabbit breeding.
12. Principles of fur animal breeding.

### Literature:

- Frelich, J. a kol.: Chov hospodářských zvířat I. ZF JU, České Budějovice, 2011.  
Matoušek, V. a kol.: Chov hospodářských zvířat II. ZF JU, České Budějovice, 2013.



## LANDSCAPING

Erosion and its classification. Mechanism of erosion processes. Water and wind erosion. Model calculations of erosion phenomena. Erosion and environmental pollution. Technical anti-erosion measures.

1. Geodesy. Measuring works. Measure systems. Geodetic instruments and tools.
2. Determination of horizontal and vertical direction. Measurement of constant angles. Practical measurements - horizontal and vertical direction.
3. Measurement of lengths. Practical measurements. Laying out straight lines and fixed angles.
4. Topographic measurements. Practical measurements - direct measurement of lengths. Height measurements. Methods. Levelling principle. Position and height delineation work.
5. Terms and definitions of landscaping. Development stages of landscaping
6. Basic stages of Complex Land Adjustment (KPÚ).
7. Selection of cadastral area for land adjustment and commencement of land adjustment. Introductory meeting.
8. Surveys and analyzes, geodetic preparation. Determination of land adjustment circuit. List of owners' claims.
9. Elaboration of a plan of common facilities. Elaboration of a proposal for a new land arrangement.
10. Approval of Complex Land Adjustment and issuance of a decision on the approval of Complex Land Adjustment proposal and the transfer of ownership rights. The stage of implementation.
11. Linkage of land adjustments to territorial planning
12. Basic parameters of flow adjustments.
13. Comprehensive soil survey (KPP) and rated soil ecological unit (BPEJ).
14. Physical properties of soils. Wind erosion. Water erosion. Calculations of the Wishmeier-Smith equation.
15. Agrotechnical anti-erosion measures. Technical anti-erosion measures.
16. Water reservoirs in the agricultural landscape.
17. Relationship between territorial planning documentation and land adjustment.
18. Soil types and sorts - basic representatives in the Czech Republic.
19. Erosion and its classification. Mechanism of erosion processes. Water and wind erosion. Model calculations of erosion phenomena. Erosion and environmental pollution. Technical anti-erosion measures.

### Literature:

Dumbrovský, M., Mezera, J. a kol.: Metodický návod pro pozemkové úpravy a související informace. VÚMOP, Praha, 2000.

Zákon č. 139/2002 Sb. O pozemkových úpravách a pozemkových úřadech



Vyhláška č. 545/2002 Sb. O postupu při provádění pozemkových úprav a náležitostech návrhu pozemkových úprav

Hánek, P. a kol.: Stavební geodézie. 1. vydání. ČVUT, Praha, 2008.

Hánek, P., Hánek, P. (Jr.), Maršíková, M.: Geodézie pro obor pozemkové úpravy a převody nemovitostí. ZF JU, České Budějovice, 2007, 88 s. 2. vydání 2008.

## LAW

1. Current land adjustment legislation.
2. Development of legislation on land use planning.
3. Administrative Code.
4. Ownership rights to property.
5. Cadastral law.
6. Construction law.
7. Construction codes.
8. Legal relations to immovable property.
9. Legal relations to movable property.
10. Solution of land or other real estate entering into the solution of land adjustments.
11. Civil Code.
12. Legal basis of real estate valuation.

### Literature:

Current legislation

Bradáč, A., Fiala, J.: Rádce nemovitosti, Linde, Praha, 1998

Bradáč, A., Fiala, J.: Nemovitosti – oceňování a právní vztahy, Linde, Praha, 2004

The Department of Landscape Management organizes a preparatory course for the entrance exam for applicants to the follow-up study programme Landscaping and Real Estate Transfers. Those interested in information about this course can contact the head of the department doc. Ing. Pavel Ondr, CSc. ([ondr@zf.jcu.cz](mailto:ondr@zf.jcu.cz)) or Ing. Monika Březinová, Ph.D. ([brezina@zf.jcu.cz](mailto:brezina@zf.jcu.cz)).



## BOTANICS

## ZOOLOGY

### Botanics

1. Principles of cytology, histology and organology of plants.
2. Anatomical and morphological characteristics used in taxonomic determination of plants.
3. Determination of common and endangered representatives of Central European flora, including basic knowledge about their ecology and the legislative framework for plant management.
4. Systematics with emphasis on groups included in the A and B annexes of the list CITES.
5. Geographical extension, anatomy, morphology, ecology, causes of threats, issues of ex situ and in situ cultivation and protection issues.

### Zoology

1. Principles of taxonomy, morphology, anatomy, physiological specifics and ecology of animals.
2. Determination of common and endangered representatives of Central European fauna, including basic knowledge about their ecology and protection.
3. List of representatives of the individual taxonomic groups of animals listed in the A and B annexes of the list CITES.
4. Geographical extension of individual taxa, basic data on their biology, type of threat and issues of protection of species included in CITES.
5. Basic knowledge of the breeding of common animal species in human care and the legislative framework for handling animals.

### Literature:

Hendrych, R.: Systém a evoluce vyšších rostlin. Academia, Praha, 1997.

Bell, P. R., Hemsley, A. R.: Green plants. ed. 2. Cambridge University Press, 2000.

CITES, Úmluva o mezinárodním obchodu ohroženými druhy volně žijících živočichů a rostlin. Úřední věstník Evropské unie, Nařízení Komise (EU) č. 750/2013 ze dne 29. července 2013, kterým se mění nařízení Rady (ES) č. 338/97 o ochraně druhů volně žijících živočichů a planě rostoucích rostlin regulováním obchodu s nimi.

Gaisler, J., Zima, J.: Zoologie obratlovců. Academia, 2007

Hickman, Jr. C., Roberts, L., Keen, S., Larson, A., Eisenhour D.: Animal Diversity. 4th ed., Boston, MA: McGraw-Hill, 2007.

Rajchard, J. a kol.: Speciální zoologie. 1. skriptum. ZF JU, České Budějovice, 2010.

Sedlák, E.: Zoologie bezobratlých. 2. vyd., Masarykova univerzita, Brno, 2005.

Stejskal, V.: Úvod do právní úpravy ochrany přírody a péče o biologickou rozmanitost, Nakladatelství Linde Praha, a.s., Praha, 2006



## GROWING PLANTS

1. Production conditions for growing plants on arable land in the Czech Republic - zoning production areas, soil and climate conditions, the influence of the current weather conditions on growing plants, the current structure of crop production in the Czech Republic.
2. Growth and development of field crops, physiological bases of yield production of majority crops, manifestation of agrotechnical measures.
3. Importance, biology and technology of growing cereals of the 1st group (wheat, rye, triticale, barley, ts).
4. Importance, biology and technology of corn cultivation (overview of other cereals of the 2nd group).
5. Importance, biology and technology of growing legumes (peas, legume-cereal mixtures and an overview of other legumes).
6. Importance, biology and technology of oilseeds (rape, poppy, sunflower).
7. Importance, biology and technology of growing tuberous and seed root crops (potatoes, sugar beet, overview of fodder root crops).

### Literature:

Diviš, J. a kol.: Pěstování rostlin (učební texty). ZF JU, České Budějovice, 2010.

<http://rv.zf.jcu.cz/wp-content/uploads/2019/11/Pestovani-rostlin-ZF-JU-ucebni-texty.pdf>

Petr, J., Húska, J. a kol.: Speciální produkce rostlinná - I. (obecná část, obilniny). AF ČZU, Praha, 1997.

Hosnedl, V., Vašák, J., Mečiar, L. a kol.: Rostlinná výroba - II (Luskoviny, olejní). AF ČZU, Praha, 1998.

Jůzl, M., Pulkrábek, J., Diviš, J. a kol.: Rostlinná výroba - III. (Okopaniny). 1. vyd., MZLU, Brno, 2000.



## ANIMAL HUSBANDRY

1. Importance of dairy cattle breeding. Breeds. Factors influencing milk yield. Technique and technology of breeding of individual categories.
2. Importance of beef cattle breeding. Basic breeds. Meat production and cashing of cattle for slaughter. Breeding technique and technology.
3. Importance and use of horses. Breeds. Breeding technology.
4. Principles of sheep and goat breeding. Breeds bred in the Czech Republic. Main utility properties. Breeding technique and technology.
5. Importance of pig breeding. Utility properties. Breeds and utility types. Selection and hybridization programmes.
6. Technique and technology of breeding individual categories of pigs. Technological fattening systems.
7. Principles of poultry production. Characteristics of basic species and utility types. Laying and its characteristics. Growth and fattening abilities. Technological process of production of table eggs and fattening of broiler type of hens, turkeys, ducks, muskrats and geese.

### Literature:

- Frelich, J. a kol.: Chov hospodářských zvířat I. ZF JU, České Budějovice, 2011.  
Matoušek, V. a kol.: Chov hospodářských zvířat II. ZF JU, Č. Budějovice, 2013.



### Annexe 3: Estimated numbers of students to be admitted to studies in the academic year 2022/2023

#### 1. Bachelor's degree programmes – full-time:

○ Agroecology	40 students
○ Agribusiness	40 students
○ Biology and Conservation of "Hobby" Organisms	40 students
○ Landscaping and Real Estate Trade	60 students
○ Agriculture	60 students
○ Agricultural Biotechnology	40 students
○ Animal Husbandry	60 students
○ Agricultural machinery and technology	60 students

#### 2. Bachelor's degree programmes – part-time:

○ Agroecology	40 students
○ Agribusiness	40 students
○ Biology and Conservation of "Hobby" Organisms	40 students
○ Agriculture	40 students
○ Zootechnics	60 students

#### 3. Consecutive degree programmes – full-time:

○ Quality and processing of agricultural products	40 students
○ Agricultural Biotechnology	40 students
○ Agricultural machinery and technology	40 students
○ Agroecology	40 students
○ Biology and Conservation of "Hobby" Organisms	40 students
○ Zootechnics	60 students
○ Multifunctional Agriculture (in English)	20 students
○ Agribusiness*	40 students
○ Landscaping and Real Estate Trade*	40 students
○ Agricultural Engineering*	40 students

#### 4. Consecutive degree programmes – part-time:

○ Agroecology	40 students
○ Zootechnics	40 students
○ Biology and Conservation of "Hobby" Organisms	40 students
○ Agribusiness*	40 students
○ Agricultural Engineering*	40 students

\* Degree programmes undergoing the accreditation procedure. Submitting applications for these programmes will be possible after the accreditation is granted.