Czech University of Life Sciences Prague
Faculty of Agrobiology,
Food and Natural Resources

Study in English

Faculty of Agrobiology, Food and Natural Resources

BSc, MSc and PhD Programs

Czech University of Life Sciences

www.agrobiology.eu

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FAFNR, FEM

Faculty of Agrobiology, Food and Natural Resources (FAFNR)

Brief History

The Faculty of Agrobiology, Food and Natural Resources is one of the founding Faculties of the Czech University of Life Sciences Prague. The history of the foundation of the university is closely related with the development of agriculture and the food sector in Central Europe. It started in 1906 as an independent unit of Agriculture at Czech Polytechnics in Prague. Tradition, long term development and the effort of the academic staff helped to significantly build a modern, internationally well-recognized educational and research institution which is successfully ranked as the leading Czech University in the QS world university ranking by subject.

The faculty is home to more than 3,600 students, 160 academic staff as well as 110 technicians and administrative officials. It is the second largest Faculty at the University and the largest Faculty in its field in the Czech Republic.

The strong background and growth potential can assist with offering a wide range of study programs focused on the traditional areas of agricultural production, as well as growing sectors related to the quality of agricultural products, food security and human nutrition, horticulture and landscape architecture, the breeding of companion and exotic animals, animal therapy, natural resources, waste management, and the development of rural areas. The faculty currently offers more than twenty Bachelor Programs, a similar number of Master's Programs and seven Doctoral (PhD) Programs.

The growth of the faculty's international recognition is partly thanks to its membership in the prestigious Euro-league for Life Sciences university consortium, bringing together seven leading European universities focusing on similar topics.

A high priority of the Faculty is successful cooperation in the international study exchange programme Erasmus+, under which the Faculty signed more than 80 bilateral agreements covering universities all over Europe. Annually, about 150 students from more than 20 countries spend at least one semester with us in the classrooms and labs.

Iva Langrová
dean

The growing international student exchange program and the number of students who study there from abroad is due to the accredited and regularly opened programs taught in English. Two Bachelor's programs, three Master's programs and all seven PhD programs are offered in English for both foreign and Czech students. Their high level of quality is ensured by the close cooperation with foreign universities to offer double or joint degree Master's programs.

You can find an introduction to our English study programs as well as our facilities in the brochure you have just opened. You are warmly welcomed to apply for any of the offered study programs and visit us on our unique campus in the magnificent capital city of Prague.

FAFNR Departments (titles in Czech included)

Department of Botany and Plant Physiology
KBFR – Katedra botaniky a fyziologie rostlin
Department of Chemistry
KCH – Katedra chemie
Department of Soil Science and Soil Protection
KPOP – Katedra pedologie a ochrany půd
Department of Agroenvironmental Chemistry and Plant Nutrition
KAVR – Katedra agroenvironmentální chemie a výživy rostlin
Department of Agroecology and Crop Production
KARP – Katedra agroekologie a rostlinné produkce
Department of Plant Protection
KOR – Katedra ochrany rostlin
Department of Veterinary Sciences
KVD – Katedra veterinárních disciplin
Department of Microbiology, Nutrition and Dietetics
KMVD – Katedra mikrobiologie, výživy a dietetiky
Department of Zoology and Fisheries
KZR – Katedra zoologie a rybářství
Department of Food Science
KKBP – Katedra kvality a bezpečnosti potravin
Department of Animal Science
KCHHZ – Katedra chovu hospodářských zvířat
Department of Horticulture
KZ – Katedra zahradnictví
Department of Landscape Architecture
KZKA – Katedra zahradní a krajinné architektury
Department of Genetics and Breeding
KGŠ – Katedra genetiky a šlechtění
Department of Ethology and Companion Animal Science
KEZCH – Katedra etologie a zájmových chovů
Department of Water Resources
KVZ – Katedra vodních zdrojů

Other facilities

Apart from the departments, the Faculty has a number of other facilities. Some are mainly focused on research, while others primarily serve as demonstration stations for teaching. Some of the traditions include research (or testing) stations where diploma and dissertation theses are conducted in the field or under stable conditions and where contracts are carried out in the field of variety testing, breeding technologies or feed testing. The following new workplaces have been established for the creation of new study programs: The Center for Canine Behavioural Research and the Center for Equine Science and Education in Humpolec. These recently set up new laboratories boast cutting edge equipment. They serve mainly for scientific purposes.

Center for Equine Science and Education in Humpolec
(Centrum pro výuku chovu koní Humpolec)

Center for Canine Behavior Research
(Centrum pro výzkum chování psů)

Demonstration and Experimental Center
(Demonstrační a experimentální pracoviště)

Demonstration and Research Station in Troja
(Demonstrační a výzkumná stanice Troja)

Laboratory of Environmental Chemistry
(Laboratoř environmentální chemie)

Laboratory of Cereal Quality
(Laboratoř jakosti obilovin)

Pig Breeding Test Station in Ploskov
(Testační stanice Ploskov)

Research Station in Červený Újezd
(Výzkumná stanice Červený Újezd)

Research Station in Uhříněves
(Výzkumná stanice Uhříněves)

Why study with us?

The Czech University of Life Sciences in Prague invites international students from around the world to come to Czech Republic to take advantage of the wide range of superb, first-class study programs. Although there are many reasons to study here, the top 5 would have to be:

1

Excellence

The Czech University of Life Sciences is a multidisciplinary institution of higher learning and research, and a scientific center of international repute. Ranked among the world's leading universities, at the CULS, students of all backgrounds receive a university education where excellence is emphasized. The faculty and alumni have been awarded numerous national and international prizes.

2

Global

At the Faculty of Agrobiology, Food and Natural Resources, there are 11 study programs fully taught in English: two Bachelor's programs, three Master's programs and seven Doctoral programs. Czech students willing to study in the inspiring international environment are also enrolled in the English taught programs. Besides Czech teachers, there are foreign experts, for example, from the USA, Great Britain, Germany, Austria and Portugal, giving lectures on special topics.

3

Community

The vibrant campus offers ample opportunities outside the classroom for international students to interact with one another and to meet up with their Czech peers. Students can take advantage of stimulating lectures and seminars; diverse social and cultural activities; invigorating athletic and recreational pursuits, and much more.

4

Knowledge

The Faculty of Agrobiology, Food and Natural Resources is in the center of the Czech University of Life Sciences with courses designed to open your mind to the new areas of knowledge and inquiry.

5

Prague

As the 'City of a Thousand Spires', Prague is one of Europe's architectural gems. It possesses a wildly eclectic mix of history, culture, ambiance, nightlife, and affordability that sets it apart from any other city. Its history goes back a millennium. And the beer? The best in Europe.

Vox Populi

Dilnora Mukhtorova (Uzbekistan)

This university provides me with an opportunity to enhance my skills and that also applies to the knowledge I have gained over the years. This faculty recognized my potential and granted me a good opportunity. It was affordable and interactive and any queries I had were answered. The student campus is perfectly located to enjoy the sights and sounds of the city of Prague.

Hailegnaw Niguss Solomon (Ethiopia)

Afterwards, I joined the Department of Agro-Chemistry and Plant Nutrition. I liked this department for three main reasons. The department is full of professors, colleagues and other department members, who are very eager to share their knowledge to their maximum limit. Their sociability, cooperation and friendly nature made it attractive to stay in the department. In addition, the relatively well-equipped laboratories were a big plus, helping students gain practical knowledge.

Novel Kishor Bhujel (Nepal)

I am doing a MSc in Sustainable Agriculture and Food Security under the Faculty of Agrobiology, Food and Natural Resources, which is the leading faculty in scientific research and the development of the Czech University of Life Science. My course is mainly focused on sustainability and the application of advanced technology in agriculture and food production. It is very challenging, but thanks to my professors and supervisor, it has become a piece of cake for me. Moreover, it's my privilege to be a part of a more than 100-year old university, that lies in the heart of Central Europe.

Bachelor´s Study Programmes

Study programs include theoretical subjects as well as training in the associated applied disciplines. BSc level students are basically oriented towards advancing to MSc degree study programs; nevertheless, each of the BSc study programs are complemented by specialized subjects. This provides undergraduate students with the option of immediately gaining employment after their BSc graduation. All of our study programs last three years, with the general compulsory subjects forming the students´ educational portfolio, which is further augmented by semi-compulsory as well as optional subjects, depending on the student's personal interests. The study is completed with the BSc Thesis during the BSc Degree State Examination. All of the study programs conform to the European Credit Transfer System (ECTS). Credits obtained at other European universities within the exchange programs are accepted as equivalent. The prerequisite for graduation is a secondary school diploma and sufficient theoretical background in the sciences. Studies are designed to result in a BSc degree within 3 years and are thesis oriented. A thesis must be submitted to complete the studies. The programs consist of compulsory subjects, restricted optional subjects, and freely chosen subjects. A strong command of English is required. Non-native and native students can participate in these courses without restrictions. Erasmus BSc students from our partner universities may also participate in BSc subjects.

Agriculture and Food

The concept of the program enables a scientific understanding of biological principles of agriculture, orientation in current agricultural technology, and obtaining basic knowledge of the quality and processing of agricultural products and food. The first half of the studies is focused on applied sciences and relationships between the environment and agricultural practices, in both crop and animal production. In the second part of the study program, the students are encouraged to use their developing knowledge and skills to identify practical problems of the production systems to meet the production, economic and environmental goals, as well as the quality of agricultural products and food safety. Graduates obtain a very comprehensive and broad background which provides flexibility on the labor-market or the ability to run their own business.

Sustainable Use of Natural Resources

The program is focused on the sustainable use of natural resources and the protection of the environment in relation to agricultural activities of modern human society. Attention is paid to interactions between the biosphere, agriculture, horticulture, and landscape treatment and care. Students will obtain fundamental knowledge in the main natural resources like soil, water and atmospheric sources, in their interactions and also the relations to the agriculture, economic and legal context of the environment.

Graduates can work as specialists in national and international institutions focused on the protection of natural resources. They can hold junior positions in companies, e.g. working in the field of natural resources, waste management, environmental protection and in NGOs.

Profile subjects: geology, soil science, meteorology, hydrology and hydrogeology, waste management, landscape and urban design and others.

Master´s Study Programmes

MSc programs offer students a high-level university education, which is guaranteed by the compulsory curriculum complemented by the student's own choice of specialised subjects. The studies in all of these programs take two years, and they are completed with the submission of a thesis and a final state examination.

All of the study programs conform to the European Credit Transfer System (ECTS). Credits obtained at other European universities within the exchange programs are accepted as equivalent. These study programs educate specialists in particular scientific and professional business areas. These studies are designed as a follow-up after the BSc graduation, and all fields related to agriculture and the environment may be accepted as suitable prerequisites.

Programs are strictly thesis oriented and the thesis has to be successfully delivered in order to complete the studies. Programs consist of compulsory subjects, restricted optional subjects, and freely chosen subjects. Working in multinational teams also give students the invaluable benefit of peer teaching.

The following programs are presented in English, all courses are taught by Czech lecturers and visiting international professors from our EU partner universities. This is why a strong command of English is essential. Non-native and native students can participate in courses without restrictions. Erasmus students are especially welcome to participate.

Natural Resources Management and Ecological Engineering

This joint program offers unique education and research opportunities at the individual departments of both universities. Students enrolled in the program are very flexible and can build their own study profile. They acquire deep knowledge in the management of major natural resources, including their restoration. Apart from the major compulsory subjects, they can build their own minor in the Fundamentals of Natural Resources, with an additional slight modification for environmental or ecological disciplines.

A student enrolled at the home university has to spend at least one semester at a partner university to sign up for the offered subjects and for lab work with their co-supervisor. The Diploma thesis (DT) has to be completed under the supervision of the supervisor of the home university and co-supervisor from the partner university. The delivering of the DT takes place at the home university in front of a committee consisting of staff from both universities.

The major advantages to studying in this program are: graduation from two highly recognized universities, a deep knowledge of major environmental components and their management, great language skills that enable the acquisition of positions around the world, and the development of a new friendship with the international group of students who come from all over the world.

Sustainable Agriculture and Food Security

The MSc course is intended to provide students with a detailed understanding of the sustainability of agriculture and food production. The students will be able to determine key characteristics and processes in agricultural systems and critically evaluate the production, environmental, and social aspects. Deep knowledge of sciences including biochemistry, plant and animal physiology, and others enable their further scientific growth and/or understanding, and the identification of areas for application of advanced technology in agriculture and food production. The wide offering of optional subjects allows students to acquire a deep specialization in the area of interest. Graduates are well suited to leading careers in various for-profit and non-profit institutions and governmental offices, international agri-food companies and enterprises, as well as in research institutions.

Natural Resources and Environment

These MSc studies in English are oriented towards the sustainable use, treatment and management of natural resources like soil, water and air. These resources are the most important natural resources for the sustainable development of the whole human population. The studies offer a theoretical background followed by applied knowledge about the sustainable use and management of natural resources and the positive as well as potentially negative influence of agricultural activities of human society on these resources. Students will acquire broad knowledge about the interaction between the natural resources, their sustainable exploitation and protection.

Graduates can work as leading specialists in national and international institutions focused on the exploitation and protection of natural resources. They can hold the position of a senior specialist in active companies e.g. in the field of natural resources management, soil and water management, waste management, environmental protection and in related institutions including NGOs.

Profile subjects: soil conservation and protection, soil taxonomy, soil chemistry, soil and plant relationship, water resources management, hydrometeorology, hydrology and hydrogeology, surveys, landscape management and others.

Doctoral Study Programmes

PhD studies at the Faculty of Agrobiology, Food and Natural Resources (FAFNR) cover a wide range of disciplines of life sciences. PhD students of our faculty can develop their research skills when working on topics focused on food quality and processing, animal welfare and reproduction, plant production, horticulture, soil quality, climate change, fisheries, agricultural systems, alternative sources of energy or drought issues.

During their studies, students will learn how to formulate scientific hypothesis, how to carry out original research and publish their results in scientific journals. In addition to that, students will gain knowledge in specialized subjects, soft skill subjects such as rhetoric, scientific writing or presentation skills, on seminars, conferences and in foreign traineeships.

During their studies, high-achieving students can be financially awarded with scholarships and faculty-prepared motivational programs.

Graduates of Doctoral studies will find a job according to his/her specialization as an expert or senior employee or professional specialist in:

- Research institutes, research centres and universities
- State administration
- Breeding and selection breeding companies
- Consultancy enterprises
- Foodstuff, agricultural and horticultural companies
- Institutions and companies dealing with management issues and the use and protection of natural resources
- Specialized companies providing services for the agricultural sector and breeders, laboratory equipment and diagnostics
- International rescue programs of endangered species and in zoo gardens
- In professional sinology (dog science)

Examples of research themes

Influence of natural conditions and methods of farming on the diversity of agrocenosis

Importance of the plant rhizosphere for the transformation of nutrients in the soil

Evaluation of the plant resistance to unfavorable abiotic factors, especially to drought

Breeding measures for the reduction of the influence of drought on potatoes

Utilization of biological agents for increasing persistence and the yield of clover

Historical analysis of Prague's development in relation to its surroundings

General Crop Science

This branch covers a wide range of research topics starting from the breeding of farm animals and fisheries to the breeding of domestic and exotic animals, as well as microbiology, genetics, zoology, ethology and parasitology. Research is oriented on the studies of biological characteristics, natural relations and needs of animals, their interaction with the environment and other organisms, as well as the maintaining and improving of the condition and the yield of bred animals.

Special Crop Science

Research topics are aimed at the physiology and biochemistry of plants, genetics and plant nutrition from the point of view of the quality of crop production and the rational yield of agricultural crops and the formation of crop association. Another group of research topics deals with external conditions influencing plants, e.g. coming from soil science, soil microbiology, meteorology, climatology and agro-ecology. The topics of this traditional branch deal with biological principles and practical applications of crop production, with the landscape in the framework of rural development. According to the specific specialisation of training stations, the research is focused on the biology and technology of field and garden crops growing (breeding) for productional and non-productional utilization, permanent grass cover, ornamental gardening and garden and landscape planning, processing and the quality of crop production, genetics and plant breeding, seed production, organic farming and energetic plants utilization.

General Animal Science

This branch deals with topics from the area of breeding, reproduction, techniques and technologies of breeding, the feeding of farm animals and quality, technology, processing and the storage of animal products. Research is closely connected with practice, with poultry, fur animals, rabbits, sheep, goats, pigs and cattle breeding farms.

Special Animal Science

This branch deals with topics from the area of breeding, reproduction, techniques and technologies of breeding, the feeding of farm animals and quality, technology, processing and the storage of animal products. Research is closely connected with practice, with poultry, fur animals, rabbits, sheep, goats, pigs and cattle breeding farms.

Agricultural and Forestry Phytopathology and Plant Protection

Students of this branch deal with topics from the biology, physiology and epidemiology of plant pathogens and pests, topics focused on diagnostic methods, resistance of plants to pathogens and pests and the resistance of pathogens and pests to pesticides, to chemical, biological and other methods of protection. Special emphasis is given to the utilization of up-to-date diagnostics and analytical methods.

Examples of research themes

Influence of natural conditions and methods of farming to diversity of agrocenosis

Evaluation of plant resistance to unfavourable abiotic factors, especially to drought

Historical analysis of Prague development in relation to its surroundings

Modelling climate change impacts on the thermophilic vegetables

Improving of utilization of crude protein in forage crops through growing in legume-grass mixture

Agricultural Chemistry

Doctoral thesis topics are oriented towards study processes in the transformation of chemical agents in agricultural systems, in agricultural products and in foodstuffs. Thanks to the utilization of up-to-date analytical techniques for the quality control of agricultural and food products, graduates of this multidisciplinary program become experts who are able to interpret analytical data and the contained information.

Exploitation and Protection of Natural Resources

This branch is especially focused on the evaluation and protection of soil, the protection of water resources and the atmosphere, the processing and use of waste and the reduction or improvement of the negative influence of human activity on the environment. When working on research topics, students use modern methods in the evaluation, management and protection of natural resources, including advanced chemical analyses, geographic information systems or mathematical modelling.

Examples of research themes

Natural-derived antibacterial compounds and their interactions with antibiotics

The Regulation of Nitrification Process in Water Environment Containing High Concentration of Ammonia and Other Substances

Spatial prediction of soil properties using digital soil mapping approaches

Oxidative stress and boar sperm function

What is needed for university studies?

Bachelor's degree

For Bachelor's studies, the required documents are: a secondary school leaving diploma and a transcript of records. The tuition fee is EUR 3,000 per academic year and should be paid before enrolment, after acceptation for studies. Non-EU applicants have to submit evidence of their previous diplomas as well. For detailed information, see **agrobiology.eu/rofe**. Documentation of previous diplomas is an essential condition if a visa application is needed and for registration for studies as well.

Masters's degree

The duration of our English taught bachelor programs is 3 years, meaning 6 semesters, starting in October.

For the Master's studies, the required documents are: Bachelor's diploma and transcript of records from a relevant field of studies (sciences, agriculture, chemistry...). The tuition fee is EUR 3,000 per academic year and should be paid before enrolment. Non-EU applicants have to submit evidence of their previous diplomas. For detailed information about this process, see **agrobiology.eu/road**. Documentation of previous diplomas is an essential condition if a visa application is required and for registration for studies as well. The duration of English taught Master's programs is 2 years, e.g. 4 semesters, starting in October.

Doctoral study

Studies in English are subject to a fee of EUR 500 per academic year. The duration of our English taught doctoral programs is 4 years, e.g. 8 semesters, only starting in October.

More information: **agrobiology.eu/dsp**

The duration of English taught master programs is 2 years, e.g. 4 semesters, starting at October.

Knowledge of English

The applicant has to download documents about their previous studies. Knowledge of English is expected on the minimum level of B2. A certificate is necessary.

How do I apply for my studies?

The submission site (agrobiology.eu/SUB)

For Bachelor's, Master's and Doctoral studies: The submission site **agrobiology.eu/sub** opens for the following academic year in December and is open until the 31st of March of each year. You must take part in the admission's procedure. In some fields (programs), you must pass the entrance examination, or talent exams. It is very important to follow the electronic communication with the university through the portal where you have submitted the application (is.czu.cz) and through your e-mail. Follow all deadlines that are binding for you.

Accommodation at the University

If you have successfully passed the admission's procedure, you need to apply for a student visa / residence permit. CULS will provide you with all the necessary documents for your visa.

High school students may be accommodated, provided they are at least 18 years old. At the same time, it is necessary to ask CULS to book a hostel accommodation and handover a deposit of 3,500 CZK.

More on **agrobiology.eu/siia**

Cost of living in Prague

The monthly cost of living at Czech universities is about 10,000 CZK. It includes: Accommodation - 3,500 CZK/Month, Food — 2,500 CZK/Month, Short-term tickets for public transport 300 - CZK/Month, Other expenses (literature, cultural events) 200 CZK/Month, Travel costs to and from the Czech Republic, clothing and other expenses are not included.

Jobs for students

CULS allows students to participate in work and projects at the departments according to their interest and focus. Prague offers students many opportunities for taking a part-time job in their free time. The Faculty manages the Job Portal for Students or Fresh Graduates: http://agroprace.cz (Czech language)

CAMPUS CULS

1) Rectorate

2) Assembly hall

3) Faculty of Agrobiology, Food and Natural Resources (FAFNR) pavilion A

4) Faculty of Forestry and Wood Sciences (FFWS)

5) Faculty of Enviromental Sciences (FES)

6) Faculty of Economics and Management (FEM)

7) Faculty of Engineering (FE)

8) Dormitory A + health Center

9) Dormitory BCD

10) Dormitory EFG, club F, restaurant G

11) Dormitory JIH, restaurant JIH

12) Menza

13) Demonstration and Experimental Field

14) Center Department of Physical Education

15) FEM - Department of Languages

16) FAFNR - Department of Veterinary Disciplines pavilion C

17) Educational greenhouses

18) FE - laboratories and workshops

19) FE - Circular Pavilion, student club

20) Production horticulture

21) FAFNR pavilion B

22) FAFNR - Weather station

23) Ornamental Garden

24) Faculty of Tropical AgriSciences (FTAS)

25) Pavilion FEM and FFWS

26) Demonstration and Experimental Stable

27) Study and information center, congress hall

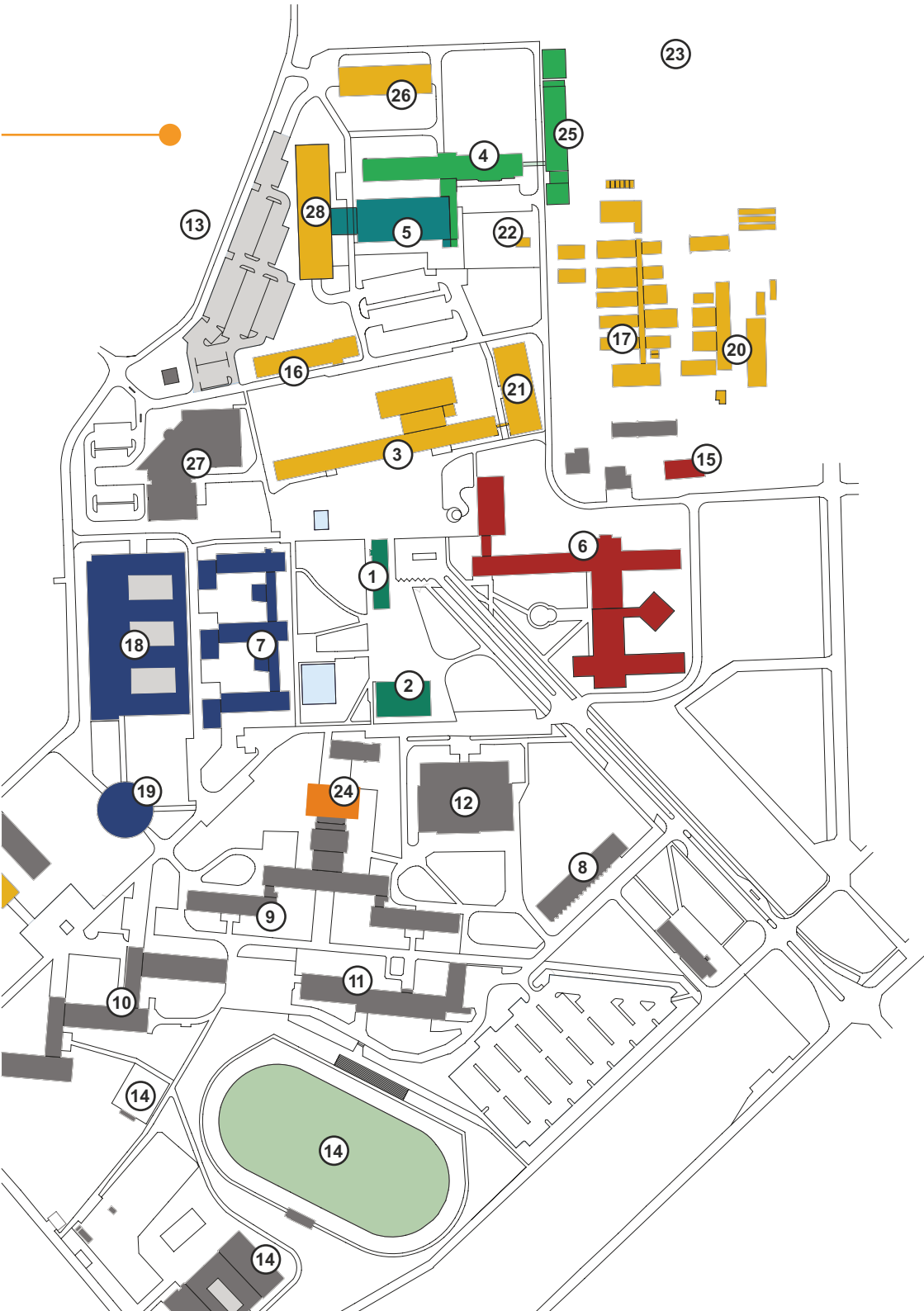
28) FAFNR pavilion D

International Festival of Documentary Films on Natural and Agricultural Sciences and Sustainable Development

The legendary open-air festival Miss Agro is the official event of the Czech University of Life Sciences in Prague

Prague. This city rivals any other in Europe in terms of sheer beauty but there is much more on offer than just a pretty face.

The Czech Republic is one of the safest countries in Europe.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Czech University of Life Sciences in Prague

one university - six faculties - unlimited possibilities