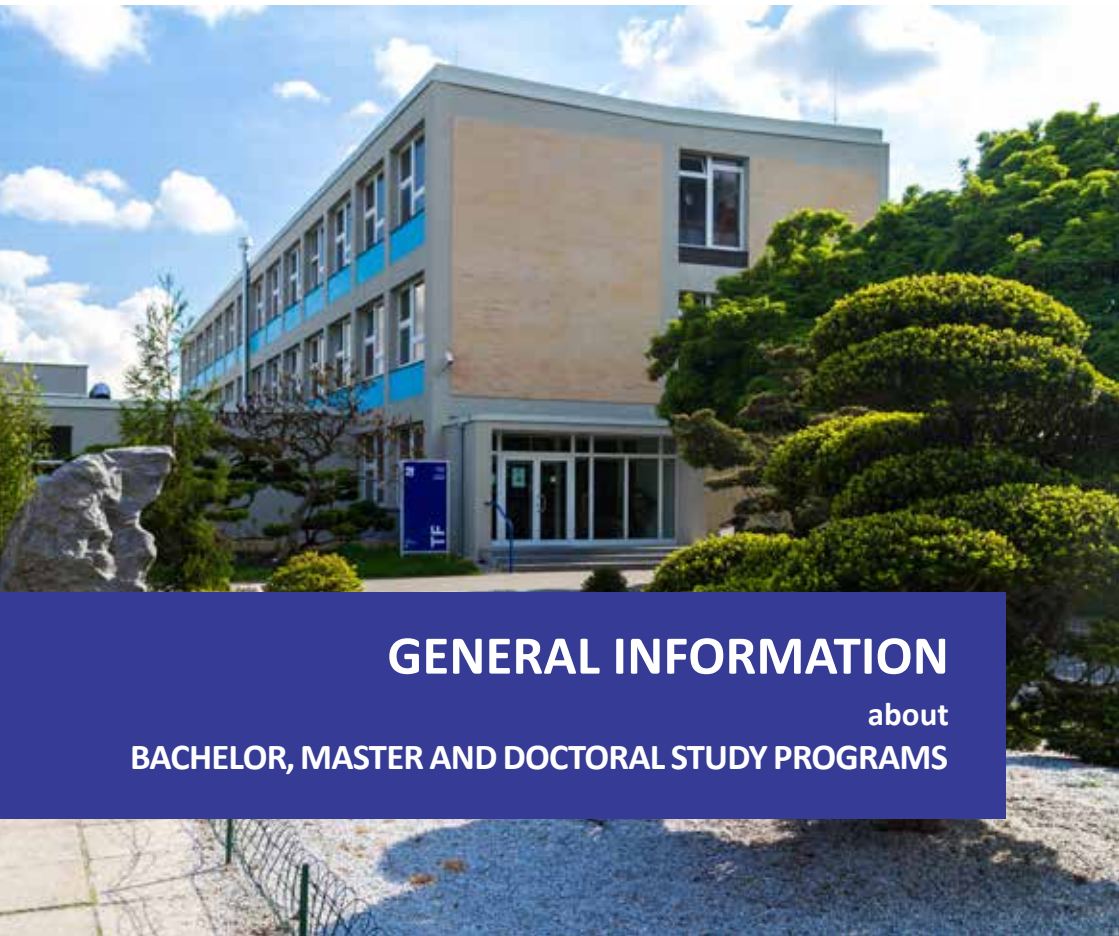




Czech University of Life Sciences Prague

**Faculty of  
Engineering**



## **GENERAL INFORMATION**

about  
**BACHELOR, MASTER AND DOCTORAL STUDY PROGRAMS**



**Study in Prague**



## MAIN INFORMATION SOURCES

### CONTACT ADDRESS

Czech University of Life Sciences Prague  
Faculty of Engineering  
Kamýcká 129,  
165 21 Praha 6 – Suchdol

[www.czu.cz](http://www.czu.cz)

[int.tf.czu.cz](http://int.tf.czu.cz)

### STUDY DEPARTMENT FE

BSc and MSc study programs

**Lucie Marečková**

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PhD study programs

**Mgr. Dana Skrbková**

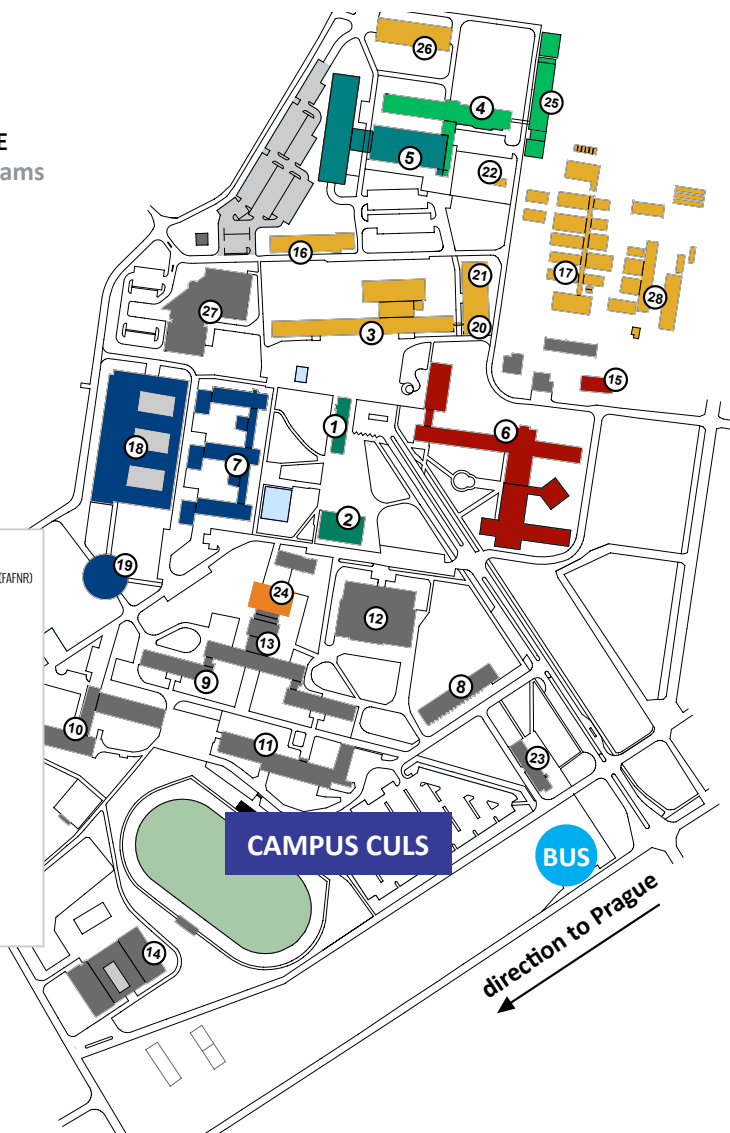
+420 224 384 220

[skrbkova@tf.czu.cz](mailto:skrbkova@tf.czu.cz)

### HOW TO GET THERE

From the metro station “Dejvická” line “A” take the 107 or 147 bus in the direction of Suchdol to the bus stop “**Zemědělská univerzita**”

1. Rectorate
2. Graduation Hall
3. Faculty of Agrobiolology, Food and Natural Resources (FAFNRR)
4. Faculty of Forestry and Wood Sciences (FFWS)
5. Faculty of Environmental Sciences (FES)
6. Faculty of Economics and Management (FEM)
7. Faculty to Engineering (FE)
8. Hall of Residence - Dormitory A
9. Halls of Residence - Dormitories BCD
10. Halls of Residence - Dormitories ETG
11. Halls of Residence - Dormitories JIH
12. Student and Staff Refectory
13. Club “C”
14. Department of Physical Education and Sport
15. FEM - Department of Languages
16. Department of Veterinary Sciences
17. FAFNR - Greenhouses
18. FE - Workshops
19. FE - Circular pavilion, Student Club
20. FAFNR - Pavilion A
21. FAFNR - Pavilion B
22. FAFNR - Weather Survey Station
23. Medical Centre, Shop, KB Bank
24. Faculty of Tropical Agr/Sciences (FTA)
25. FEM - Pavilion / FFWS Carpentry Workshop
26. FAFNR - Experimental Stable
27. Study and Information Centre
28. University Garden Centre



# GENERAL INFORMATION

## CZECH REPUBLIC

The Czech Republic is situated approximately in the geographical centre of Europe and has an area of 78,866 sq. km. It is a landlocked country 326 km from the Baltic and 822 km from Adriatic Sea. It shares borders with Germany (810 km), Poland (762 km), Austria (466 km) and Slovakia (265 km). The highest point of elevation is the peak of Mt. Snezka (1,602 m above the sea level) and the lowest point of elevation is near Hrensko where the River Labe leaves the Czech territory (117 m above the sea level). The Czech Republic is divided into 14 regions.

The metropolitan region of Prague is by far the most developed. It belongs to the most developed regions within the EU. GDP per capita in Prague is markedly higher than in other regions. In 2003 the average GDP per capita (in current prices) in Prague was 226% of the average for the whole country. Of all of the regions of the new EU member states only Prague is clearly above the EU average, as far as the GDP and Purchasing Power Standard are concerned. Some sites in the Czech Republic are also listed in UNESCO'S World Heritage Fund.

### **Total Population**

(Census 2004): 10,221,000

### **Urban Population**

(Census 2004): Praha (1,171,000), Brno (368,000), Ostrava (311,000),

### **Vital Indicators**

(Census 2004): Live births per 1000 inhabitants 9.6;

Deaths per 1000 inhabitants: 10.5

### **Life expectancy**

(Census 2003): Males 72.0 years; Females 78.5 years





## PRAGUE

Prague, the capital of the Czech Republic, has been an important centre of culture and learning for over a thousand years. Its first university was established as early as 1348. It was the first university of its kind in central Europe. Famous European scholars of the late Renaissance, such as astronomers Tycho Brahe and Johannes Kepler, lived and worked in Prague. Throughout the 17th, 18th and 19th centuries many scholars and scientists of world renown held chairs at Prague's Charles University. In the late 19th and early 20th century Ernst Mach and Albert Einstein held chairs in the Department of Theoretical Physics at the German University of Prague. French,

German and particularly Italian architects, sculptors and garden designers, have given Prague a unique cosmopolitan flair. The Old Town, Charles Bridge, the Small Quarter, Prague Castle, all these masterpieces of late Gothic, Renaissance and Baroque architecture have been carefully maintained and protected by successive generations of rulers and monarchs, keeping the historical centre of Prague virtually untouched and perfectly preserved. UNESCO has listed Prague's historical centre as one of the cultural heritages of mankind. Apart from being an attractive tourist destination, a centre of arts and culture, Prague is also a prominent centre for higher education.

## CZECH UNIVERSITY OF LIFE SCIENCES

The history of Czech University of Life Sciences Prague starts with the establishment of the Department of Agricultural and Forestry Sciences at the Czech Polytechnics University in 1906. In 1920 the Department of Agriculture received the status of a University College. The University College of Agriculture (VSZ) was then part of the new Czech Technical University in Prague (CVUT). After WWII, from 1948 to 1960's, VSZ grew in size and by 1965 it was moved to a newly built campus in Suchbátka, a small township about six kilometres from downtown Prague. In January 1995 VSZ was renamed to Czech University of Agriculture Prague (CUA). In line with the Bologna Declaration (1999), a three tier (BSc,

MSc, PhD) educational system was set up at all Faculties and Institutes at the start of the new millennium. In January 2007 the official English name of our university was changed to Czech University of Life Sciences Prague (CULS). Students can be accommodated in modern halls of residence with Internet access in each room. Individual academic, cultural and social activities are facilitated by a number of clubrooms, computer rooms, video and audio study rooms and in a restaurants. Various sports facilities are available as well - two gymnasiums with a body building centre, a covered swimming pool, several ballgame pitches, tennis courts, a track and field area, and a football pitch.

## FACULTY OF ENGINEERING

The Faculty of Engineering (formerly Faculty of Mechanisation) was founded as part of the University of Agriculture previously established in 1952. It is located at the Czech Republic in city of Prague which is regarded as

one of the most beautiful cities in the world. Since January 1, 1995, it has been a part of the currently re-named "Czech University of Life Sciences (CULS) Prague". The Faculty staffs have been involved in the field of edu-



cation, science and research, expertise and consultancy activities. The Faculty has ten departments, several laboratories, and central development workshops. The Faculty of Engineering has signed more than 40 international agreements with European universities, and the ECTS (European Credit Transfer System) applied by CULS provides acceptable

conditions for student mobility. A part of the course can thereby be taken at one of the recommended universities abroad. Partaking in foreign placements and practical training abroad is also possible if based on a relevant construction of the student's individual study plan. More information about Faculty of Engineering you can see at [www.tf.czu.cz/en](http://www.tf.czu.cz/en).

## BSC AND MSC APPLICATION

Application is accepted in electronic form only. Visit the website [prijimacky.czu.cz/en](http://prijimacky.czu.cz/en) for detailed information. Application fee is 500 CZK or 25 EUR - payment instructions can be found at the end of the online registration. The deadline for submitting the application is 31st March

annually. In case you are not able to attend the Entrance Exam here at CULS, the proposal term for Entrance Exam will be notified later at the Czech Embassy in your country of origin. This procedure would be arranged by the study coordinator and appropriate authority.

## PHD APPLICATION

The applicant shall complete the application for study using the web application e-doktorand [prijimacky.czu.cz/prijimacky](http://prijimacky.czu.cz/prijimacky). The applicant should submit the electronic application and the printed version with the attachments (see above) to the Science and Research Department of FE, CULS Prague (Mrs. Skrbková) by the 31st May every academic year (both electronic and printed version). The applicant

is required to attend an oral entrance exam in English focused on a specialised field related to the selected dissertation topic. In case the applicant is not able to attend the Entrance Exam here at CULS, the proposal term for Entrance Exam will be notified later at the Czech Embassy in the applicant's country of origin. This procedure will be arranged by the study coordinator and appropriate authority.

According to the Czech legislative, it is mandatory to pay the Tuition Fee for study in different language than Czech. However, there is also a Merit scholarship

for students with excellent study results depending on the Deans or Rectors decision. More information you can find at [int.tf.czu.cz](http://int.tf.czu.cz).

**Tuition fee: 3 000 EUR / academic year - BSc and MSc study programs**

**Tuition fee: 5 000 EUR / academic year - PhD study program**

**Faculty of Engineering offers following courses which are taught in English**



BSc. Study program



## BSc in AGRICULTURAL ENGINEERING

Agricultural Engineering is a three year bachelor study program taught in English. The first two years of study demonstrates theoretical basis in agricultural technology which enables students to undertake further study in technical and biological sciences. The last year of study is focused on the practical application of the theoretical knowledge. The selection of undergraduate thesis allows students to specialize in a specific area of interest such as biological systems engineering. Graduates of the Agricultural Engineering study program can utilize their knowledge by the application of engineering principles to the solution of agricultural problems. Erasmus exchange students at BSc. level can enrol for one or two semesters.

### Contact

**Lucie Marečková**

International Relation Office

BSc. study coordinator.

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tel: +420 224 383 212

International Relation Office

**Faculty of Engineering**

Czech University of Life Sciences Prague

Kamýčká 129, Praha 6,

Prague, 16521

Czech Republic

### Subjects of Final state examination

Biosystems Engineering

Agricultural Engineering

Production System Management

[More information you can find at int.tf.czu.cz](http://int.tf.czu.cz)

Subject code	Subject Name	ECTS
<b>1st year - winter semester</b>		
	Foreign language I	2
AHA29E	Agricultural systems I	5
ACT02E	Chemistry	5
TAT01E	Mathematics I	7
TGTXXE	Informatics	4
TCT09E	Introduction to the engineering visualisation	5
RTT01Z	Physical training and sport	1
<b>1st year - spring semester</b>		
	Foreign language I	3
TBT01E	Engineering Physics	6
TAT02E	Mathematics II	6
TDT02E	Material Science	5
ALE025E	Agricultural systems II	5
TAT04E	Engineering statistics	3
RTT01Z	Physical training and sport	1
TFT22Z	Practical training	2
<b>2nd Year- winter semester</b>		
AWX01E	Czech language and culture	3
THT13E	Electrical Engineering	5
TCT11E	Introduction to the engineering work	3
TCT14E	Engineering mechanics	5
TCT03E	Strenght of materials	5
TDT11E	Manufacturing technology	5
TCT17E	Fluid mechanics	4
<b>2nd Year - spring semester</b>		
AWX01E	Czech language and culture	3
TCT16E	Theory of machines	4
ACT01E	Fuels and lubricants	4
TFT23E	Machinery for plant production	5
TBT05E	Agromaterials	6
TBT10E	Renewable energy sources	4
TCT19Z	Energetical engines	4
<b>3th Year- winter semester</b>		
ENE41E	General Economics I.	5
TET22E	Tractors and transportation equipments	5
APA38E	Soil science	5
TCT21E	Biosystems engineering	5
TGT21E	Machinery for animal production	5
TGX06E	Food engineering	5
TZT07Z	Bachelor thesis preparation	2
<b>3th Year - spring semester</b>		
TJX02E	Quality, dependability and renewal of machines	5
TIT01E	Production system management	5
TFX29E	Precision farming	4
TFT09E	Processing of particular substances	6
TCT09Z	Bachelor thesis preparation	8



## MSc study programme

### MSc in TECHNOLOGY AND ENVIRONMENTAL ENGINEERING

This study programme is mainly taught in English language which is provided by the Faculty of Engineering. The study programme is designed for Bc. graduates with a knowledge in technology and engineering. Bc. diplomas related to engineering and environment are also accepted. Subjects include agricultural engineering, road and urban transport, technology and equipment for waste management, technology and equipment for building constructions, trade and business in machinery and information and control technology in agrifood complexes. The programme consists mostly of compulsory subjects. The study programme delivers advanced knowledge in core engineering subjects. The knowledge acquired is applicable in machinery, ecological and environmental sciences. In the course of studies, students prepare their MSc. thesis in the field of environmental engineering and other related research areas which is a prerequisite for final examination and graduation. The graduates are well prepared for national and international positions in industry, civil services, business dealing with machinery, and technical development. Erasmus exchange students at MSc. level can enrol for one or two semesters.

#### Contact

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International Relation Office

MSc. study coordinator.

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tel: +420 224 383 212

Subject code	Subject Name	ECTS
<b>1st year - winter semester</b>		
TAT06E	Applied Mathematics	6
TBT02E	Applied Physics	6
LELS8E	Ecology and Ecological Methods	6
TCT07E	Basic Applied Mechanics	6
IUI16E	Environmental Engineering in Agriculture	6
<b>1st year - spring semester</b>		
TBT05E	Agro-materials	6
See below	<b>Compulsory Optional Subject I</b>	6
See below	<b>Compulsory Optional Subject II</b>	6
TDT07E	Material Science	6
THT01E	Energy Supply and Electric Drives	6
<b>List of compulsory optional subjects I</b>		
APA20E	Soil and Water Relations	6
TGT03E	Storage of Agricultural Materials	6
TGT110E	Techniques of Environment	6
<b>List of compulsory optional subjects II</b>		
AHA17E	Soil and Plants Relations	6
TET19E	Rural Engineering	6
TGT49E	Technology of Food Packaging	6
TFT46E	Fluid Power Mechanisms	6
TZT10Z	Project TEE	3
<b>2nd Year - winter semester</b>		
TET09E	Automobiles and Tractors	6
TFT01E	Technology and Technique for Plant Production	6
TGT01E	Technological Equip. of Buildings for Animal Production	6
ZUL03E	Landscape Ecological Application	6
See below	List of compulsory optional subject III	
APA21E	Soil Conservation and Protection	6
TGT48E	Brewing Czech Beer	6
TGT06E	Transport, Handling and Manipulation Machinery	6
TGT22E	Process Engineering in Agri-food Industries	6
TGT35Z	Programm. in Windows Environ. and Visual Basic	3
<b>2nd Year - spring semester</b>		
TIT08E	Mobile Machinery Utilization	6
EEE68E	Environmental Economy	5
TJT01E	Logistic Management	6
TGT02E	Technological Equipment for Waste Management	6
TZT05Z	Diploma Thesis - Project	7
TZT10Z	Project TEE	3

#### Subjects of Final state examination

Environmental Sciences

Technology of Agricultural Production

Logistics and Management

Environmental Engineering

[More information you can find at int.tf.czu.cz](http://int.tf.czu.cz)



## PhD in ENGINEERING OF AGRICULTURAL TECHNOLOGICAL SYSTEMS

The field of study includes all scientific and technical problems associated with the construction, operation and application of technical elements in the agricultural and food technology systems. The PhD study programme (DSP - Doctoral Study Programme) is designed for university graduates who have completed MSc-degree programme in a field in which the DSP is follow-up or closely related. The DSP basic objective is to acquire and subsequently prove the ability of independent scientific research by preparing and defending a dissertation thesis, publications and other forms of presentation of one's own research activities, including passing all the required examinations and the State Doctoral Examination. The admission procedures take place each spring and the study commences around 1st October in every academic year. The graduates have in-depth knowledge in general theory of machinery and equipment applied in agriculture and other related engineering fields. The graduates can also apply the knowledge acquired in standard engineering approaches development, particularly in the field of sensorial methods, communication techniques, computer technology and data processing together with results observed thereby.

Subject Name
1st year - winter semester
Design and Evaluation of Experiment
1st year - spring semester
English language
Mathematical Modelling
Control and Checking Systems
2nd year - winter semester
Teaching of students at MSc and BSc courses
2nd year - spring semester
Foreign language
Teaching of students at MSc and BSc courses
3th Year - winter semester
State doctoral exam
3th Year - spring semester
PhD thesis defence

### Contact

**Mgr. Dana Skrbková**

Department for Science and Research

PhD study coordinator.

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Department for Science and Research

**Faculty of Engineering**

Czech University of Life Sciences Prague

Kamýčká 129, Praha 6, Prague, 16521

Czech Republic

### Subjects of Final state examination

Theory of Technological Systems

Compulsory subject I related to the topic of dissertation thesis

Compulsory subject II related to the topic of dissertation thesis

[More information you can find at int.tf.czu.cz](http://int.tf.czu.cz)







## Department of Agricultural Machines

Teaching activities of this Department are mainly oriented to subjects concerning machines and technologies for plant production. Presently, the Department is modernized in terms of science and research as well as teaching. The Department also cooperates intensively with national and foreign agricultural machinery producers. In addition, the Department

works together with Czech research institutes and foreign universities and research institutes. Research and teaching activities are focused on Soil tillage technologies and machinery; Precision Agriculture; Hop growing and harvest technologies; Field robots. Research results are published in reputable international scientific journals.



## Department of Electrical Engineering and Automation

Department supports education in study programmes of Faculty of Engineering and others faculties of CULS. The Department primarily focuses on education and research as well as consultancy in the area of applied electrical engineering science, electric power engineering, systems modelling and simulation, automation and flexible production systems, automation implementation, in-

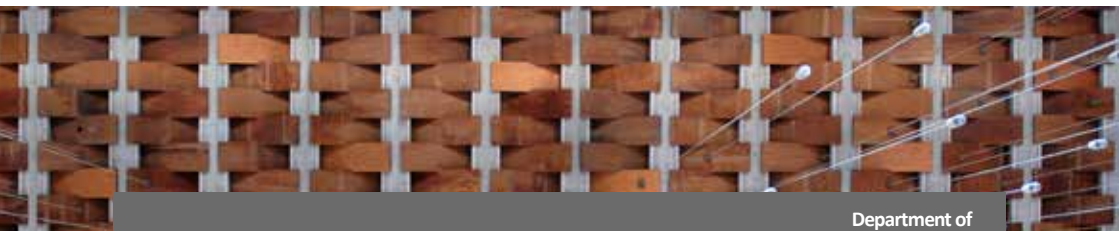
formation and regulation of technologies in industries. Further research is also centred on evaluation of meatiness of cattle meat and measuring system of Plantograf which is a one of the world's top special portable measure device that is used for the biomechanical investigation of the pressure distribution between the foot sole or tire tread pattern and the transducer.



## Department of Machinery Utilization

Along with the traditional topics aimed at exploitation, planning and management of machinery operation, the Department focuses on machinery and technology for waste disposal and management including the application of information technologies in the above mentioned domains. The Department closely cooperates with agricultural research institutes, farm and

waste-management businesses, farm machinery manufacturers and dealers as well as universities abroad. The Department carries out research concerned with precision technical and technological systems, verification of technological standards in agriculture, technologies of waste management and modern crop production technologies.



## Department of Materials and Manufacturing Technology

At present the Department teach 11 subjects which are basically designed for students of Faculty of Engineering. Research activity of the Department is focused on areas including the investigation of mechanical properties of materials, microstructures, new abrasive wear resistant materials and surface technology. The research laboratories are equipped with modern equipments: uni-

versal testing machine, microscopes, kilns for heat processing, corrosive and climatic chambers, sunny simulator, CNC cutting machine with abrasive water jet technology and briquetting presses. Based on the research, patent high boron wear resistant steel with a specific microstructure containing hard boride-carbides in metallic matrix has been established.



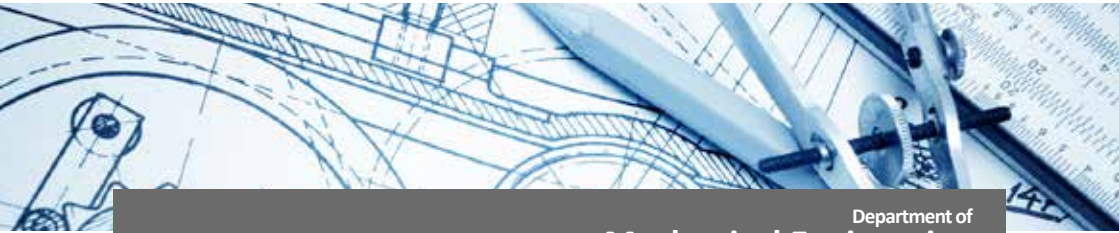
# GENERAL INFORMATION



## Department of Mathematics

The Department provides basic and advanced courses of mathematics in all study programmes taught in CULS. The research at the Department of Mathematics concentrates on several areas of pure mathematics as well as applications of mathematical methods in hydrology, physics, electrical engineering or didactics of mathematics and statistics. Characterization of hamiltonian

distributive quasigroups, characterization of properties of yeast-beta-glukan films, conditions for validity of Hardy inequalities or description of properties of generalized trigonometric functions are also investigated for over 50 years. Research results are published in recognized international journals such as proceedings of the Royal Society or Journal of Algebra.



## Department of Mechanical Engineering

The Department is aimed at teaching of students in both theoretical and practical engineering related disciplines including technical documentation, applied mechanics, strength of materials, thermomechanics, hydromechanics and machine parts. The theoretical knowledge gained by the students enhances their ability to solve practical or technical engineering problems. The students also have

the opportunity to study CAD application systems. The Department employees, in the field of science and research activities, focus on mechanical properties of agricultural materials, energy-intensive of agriculture and use of alternative energy sources. The Department Staff are also involved in national and international research projects or cooperation with foreign universities.



## Department of Physics

The members of the Department teach basic physics courses of CULS. There is also cooperation with foreign universities in the framework of Erasmus programme. Research activities of the Department are oriented to application of physics to solving the research and practical problems in power engineering, food engineering and mechanics of animals. The proper-

ties of the Agromaterials and products are mapped, described and explained. In the field of solar energy utilization or application of the unique solar tracker was developed in cooperation with industry in Spain, China as well as in Czech Republic. Many papers have been published in scientific journals, books and monographs have been also written.



## Department of Quality and Dependability of Machines

Department helps to creating a professional profile of graduate as an operational mechanical engineer. Generally, the Department offers interdisciplinary modules which are focused on technological, technical-economical and logistic issues. The focus of the Department is given to outstanding educational activities, research and development, measurement and evaluation of impacts on quality of

technical objects, exploration of changes in properties of machines in operational time in order to optimize maintenance activities, including renewal of machinery, condition based monitoring and evaluation of technical objects. Since 2004, the Department participates in cooperation with Czech Maintenance Society on specialized training course for managers in "Maintenance manager".





Department of

## Technological Equipment of Buildings

The Department covers all problems of technological equipment and machinery for animal husbandry, processing of agricultural products, control and creation of internal environment for buildings, food processing and storage technology. Furthermore, the Department deals in detail with techniques and technologies used in waste processing and disposal. Research areas over many

years have been focused on milking equipment and problems associated with energy requirements of the feed ingredients disintegration and disparity of the resulting product and issues relating to the building environment. New research fields are directed towards the packaging technologies, the engineering of waste treatment and the microbreweries technologies.



Department of

## Vehicles and Ground Transport

The mission of the Department is to carry out teaching and scientific research in the following areas: combustion engines, traffic engineering, vehicle mechanisms, mechanics and other stuff linked with vehicles and transport. Department focuses on the ecological aspects of mobile techniques' operation as well as scientific research concentrate on engine emissions, on the public

transport and transport safety. Other research topics are linked with the soil compaction under vehicles' tyres. Emphasis is put on international activities and projects. The Departmental Staff participates in international symposiums, seminars and workshops. An important international activity is the participation of members of the Department in the EU COST management committee.



## INTERNATIONAL COOPERATION

The international relations play an increasingly important role in the life of the Faculty of Engineering through teaching and research activities. Every year, the Faculty of Engineering organizes summer school programmes and special trainings for foreign students. The international exchange of the students and Staff is an integral part of the university daily life. The Faculty of Engi-



neering is also involved in development projects focused on agriculture mechanisation and technology. Some of the international cooperation is based on the memorandum of understanding. Each year, the Faculty of Engineering receives students from all walks of life. The international teachers are also members of the academic Staff involved in teaching activities.

## ERASMUS PLUS

The ERASMUS Programme is a European student exchange programme established in 1987 offering university students the possibility of studying or working in any European country for a period of at least 3 months and maximum 12 months. The name of the project refers to Dutch Renaissance humanist and theologian Desiderius Erasmus of Rotterdam. He studied at diverse European universities and described the education as a chance for modern people. Since 2014 Erasmus and other programmes were included under The European Union programme for education, training, youth and sport ERASMUS+.

All students of Faculty of Engineering can take part of their study at the recommended universities abroad or they are able to participate in international practice or internship for the preparation of individual study plans. Faculty of Engineering as well as whole Czech University of Life Sciences use European Credit Transfer System. Every student can attend Erasmus plus project. At just time Faculty of Engineering has 45 agreements around Europe and whole University has more than 200. The students will gain scholarship and its amount is dependent on the country where the student will study. Students do not have to pay any extra costs such as tuition fee, etc.

# ERASMUS+

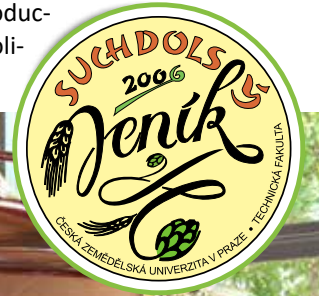
2014 - 2020 programme for Education,  
Training, Youth, and Sport



## BREWERY

The research and training microbrewery is an integral part of the Faculty of Engineering which is primarily used for student's education. The brewery brews

the beer brand which is called "Suchdol-sky Jenik" and production is 500 hectolitres annually.



## CULS PRAGUE FORMULA RACING

CULS Prague Formula Racing is a student project at the Czech University of Life Sciences Prague with facilities at the Faculty of Engineering. The students of CULS Prague Formula Racing are part of a global project Formula Student/

SAE. Every year the team designs and produces an entirely new single-seater race formula car for participation in international competitions where they have received considerable number of international awards.





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European Structural and Investment Funds  
Operational Programme Research,  
Development and Education



Czech University of Life Sciences Prague

Faculty of  
Engineering

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