UNIVERSITY OF ŽILINA IN ŽILINA
Faculty of Electrical Engineering and Information Technology

FACULTY OF ELECTRICAL ENGINEERING AND INFORMATION TECHNOLOGY

DOCTORAL DEGREE STUDY

CONTACT

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All the questions concerning your studies will be attended at the Department of Studies:
Tel.: 041/513 20 63, 20 64

Coordinator for work with students with special needs:
Vice–Dean for Education
Tel.: 041/513 20 57

ACCREDITED STUDY PROGRAMMES OFFERED FOR THE ACADEMIC YEAR 2021/2022

DOCTORAL DEGREE STUDY PROGRAMMES	
FULL-TIME STUDY LENGTH OF STUDY 3 YEARS	**PART-TIME STUDY**** LENGTH OF STUDY 4 YEARS
Electrical Power Engineering *	Electrical Power Engineering *
Electro-technologies and Materials *	Electro-technologies and Materials *
Process Control *	Process Control *
Heavy Current Electrical Engineering *	Heavy Current Electrical Engineering *
Telecommunications *	Telecommunications *
Theoretical Electrical Engineering *	Theoretical Electrical Engineering *
** study programme is also accredited in the English language* *** standard tuition fee for part-time study programmes is € 1.000 for an academic year*	

Detailed information on particular study programmes
- syllabus,
- course information sheets

can be found at http://vzdelavanie.uniza.sk/vzdelavanie/plany.php.

EXPECTED NUMBER OF ACCEPTED APPLICANTS TO THE FIRST YEAR

DOCTORAL DEGREE STUDY		
STUDY PROGRAMME / FIELD OF STUDY	**PLANNED CAPACITY**	
	FULL-TIME	**PART-TIME**
Electrical Power Engineering / Electrical Engineering	3	2
Electro-technologies and Materials / Electrical Engineering	3	2
Process Control / Cybernetics	3	2
Heavy Current Electrical Engineering / Electrical Engineering	3	2
Telecommunications / Informatics	3	2
Theoretical Electrical Engineering / Electrical Engineering	3	2
TOTAL	18	12

TERMS AND CONDITIONS OF ADMISSION

Basic condition of admission

The basic condition for admission to doctoral degree study (study programme of the third degree) is the full completion of the second degree of university study (Higher Education Act, no. 131/2002 Coll.) in the same or related field of study. In case of a foreign applicant or a student who has completed his / her study abroad, he / she shall submit along with the application form (no later than the date of enrolment) a decision on the recognition of the certificate of completion of the second degree of higher education recognized by a relevant institution in the Slovak Republic or he / she shall ask UNIZA for the recognition of the certificate of education.

Other conditions of admission

The admission procedure of the applicant begins with the delivery of the application form for the 3rd degree of study to the Faculty of Electrical Engineering and Information Technology UNIZA. Applicant for the doctoral degree study applies for the listed topics. The selection of applicants will be carried out in the form of an entrance examination. Applicants will be invited in writing.

The following will be considered at the entrance examination:

- the results of the previous study,
- language competence,
- current publication activity of the applicant,
- other activities of the applicant in the given field (Student Scientific Activity, practice, professional internships ...),
- prerequisites for independent scientific work of the applicant in the issues of the study programme in the form of a debate on a selected topic.

ADMISSION OF FOREIGN STUDENTS

The basic and other terms and conditions of admission are applicable as for the applicants from abroad as for the applicants from Slovakia.

Foreign students who study in a foreign language (i.e. not Slovak), pay the tuition fee as stated in § 92 Subsection 8 (Higher Education Act). The tuition fee is specified by the UNIZA directive and published for the respective academic year on the university website. Foreign students who study in the Slovak language do not have to pay the tuition fee. Applicants from the Czech Republic who want to apply and study at UNIZA can use the application form valid in the Czech Republic. Applicants who do not actively speak Slovak or Czech are required to attend the language training (it is possible to attend the Slovak language courses at UNIZA). For foreign applicants who were accepted on the basis of intergovernmental agreements, bilateral agreements or Slovak government grants, terms and conditions stated in respective documents are applicable.

APPLICATION FORM

Application forms are to be submitted for individual study programmes.
In case the applicant is interested in more study programmes, it is necessary to apply for each one individually, including payment of the respective admission procedure fees.
Applicants have to fill in the form Prihláška na vysokoškolské štúdium - 3. stupeň that can be found on the website of the Faculty of Electrical Engineering and Information Technology: (http://fel.uniza.sk/ in the section Uchádzači o štúdium) or on the university website https://vzdelavanie.uniza.sk/prijimacky/index.php or on the education portal: https://prihlaskavs.sk/sk/.
Concerning application form, it is necessary to enclose all the required documents and send it electronically or by post to the address of the Faculty of Electrical Engineering and Information Technology UNIZA within the stipulated deadlines.
Incomplete application form or the application form sent after the deadline will not be accepted. In case of non-participation in the admission procedure or a failure in the admission procedure, the Faculty does not refund the admission procedure fee. If the applicant wants to take part in entrance exams at several faculties of UNIZA, the application forms must be submitted separately to each faculty and the respective admission procedure fees paid separately to each faculty.

Enclosures for the doctoral degree study programmes (to be sent with application form):
- Curriculum Vitae,
- copies of documents on completion of 2nd degree education (university diploma, state examination certificate and diploma supplement) - it does not apply to the graduates of the Faculty of Electrical Engineering and Information Technology UNIZA,
- a list of published papers or other professional activity,
- proof of payment of the admission fee.

Admission fee:

Send **20 €** to:	Žilinská univerzita v Žiline, Univerzitná 1, 010 26 Žilina Bank: Štátna pokladnica IBAN: SK74 8180 0000 0070 0026 9917 const. symbol: 0308 variable symbol: 10333 – doktorandské štúdium
Payment method:	payment can be paid by bank transfer or postal order to the account above.
Proof of payment:	proof of payment is to be sent to the Faculty with the application form.

Tuition fees - in accordance with the Higher Education Act, information about the amount of tuition fee for the relevant academic year will be published on the website of the University of Žilina in Žilina within the stipulated deadlines.

With payment of the admission fee from the EU member states, the EES countries, territories that are considered a part of the EU (Treaty of Rome, Section 299) and SEPA countries, it is necessary to use BIC: **SPSRSKBAXXX**, IBAN: S**K74 8180 0000 0070 0026 9917**.

USEFUL DATES

Deadline for submitting the application form	Entrance exams
until June, 3, 2021	June, 23, 2021

ACCOMMODATION

The accommodation facilities of the University of Žilina in Žilina provide accommodation according to the accommodation capacity, taking into account the distance between the student´s permanent residence and the seat of the University. **Accommodation fee: € 54 – € 61 / month**.

BOARD

Students can use the services of the catering facility of the University of Žilina in Žilina. **Price for food: € 1.10 – € 3.20**.

SCHOLARSHIPS

Full time students of the doctoral degree study programmes are granted a scholarship pursuant to Higher Education Act, n. 131/2002 Coll. (On universities and on amendments to certain laws), §54 Subsection 18.

GRADUATE PROSPECTS

DOCTORAL STUDY PROGRAMMES

ELECTRICAL POWER ENGINEERING
(Field of study 2675 Electrical Engineering)

The doctoral study in the study programme Electrical Power Engineering is intended for graduates of the second degree of university study (Engineer/Master) who tend to have an original solution to engineering and scientific problems in the field of electrical power engineering. To solve these tasks, the doctoral student uses the latest knowledge of modern analytical and numerical methods, methods of mathematical and physical modelling, informatics, measurement of electrical and non-electrical variables, microelectronics, electrical power engineering, automatic and discrete control up to the level of artificial intelligence, including the implementation of control by appropriate processors, as well as knowledge of other disciplines. A prerequisite for successful completion of the doctoral degree study is the ability of the doctoral student to think abstractly and his/her ability to apply and implement the acquired knowledge when solving technical problems. The doctoral student will learn to correctly characterize and understand physical phenomena and experimental knowledge about these phenomena, to look for their adequate models and implement new applications in already mentioned specific disciplines, in science, research and practice. During his/her doctoral studies, the doctoral student will acquire comprehensive theoretical knowledge, experimental skills and practical experience. He/she will be able to master the methodology of scientific work and will be prepared for independent scientific work.

ELECTRO-TECHNOLOGIES AND MATERIALS
(Field of study 2675 Electrical Engineering)

Graduates of the doctoral degree study programme Electro-technologies and Materials master scientific methods of evaluation of material structures and systems in terms of processing technology, structure, durability, reliability, inter-operational and output diagnostics and control, as well as in terms of determination of basic physical properties of substrate materials and final structures. This comprehensive knowledge will enable the graduate to use it in a wide range of production technologies in electronics, both in their design and in the organization and optimization of individual technological processes. The graduate acquired the ability to predict changes of material properties in various conditions of their use, as well as in terms of the use of various technological processes in production of electrical components, structures, systems and equipment. The graduate of the third degree of university study in the study programme Electro-technologies and Materials acquired a deep theoretical and methodological knowledge about technologies and materials used in the electrical and electronics industry, properties of materials and processes in them that are the subject of scientific research or development at the level of the current state of research in the world.

PROCESS CONTROL
(Field of study 2647 Cybernetics)

The doctoral study in the study programme Process Control is intended for graduates of the second degree of university study (Engineer/Master/Master of Science) who tend to have an original solution to engineering and scientific problems in the field of management and control of transport and technological processes. To solve these tasks, a doctoral student uses the latest knowledge of modern analytical and numerical methods, methods of mathematical and physical modelling, informatics, measurement of electric and non-electric variables, microelectronics, electrical power engineering, automatic and discrete control up to the level of artificial intelligence, including the implementation of control by appropriate processors, as well as knowledge from other fields. A prerequisite for successful completion of the doctoral degree study is the ability of the doctoral student to think abstractly and his/her ability to apply and implement acquired knowledge in solving technical problems. The graduate of doctoral study in the study programme Process Control acquired knowledge based on the current state of scientific knowledge and by his/her own creative activity he/she will contribute to the development of this knowledge as well as to new findings in this field. The aim of the doctoral study is to educate such an expert who will not only have comprehensive knowledge but will be able to enrich science and knowledge in the field of process control.
He / she acquired deep theoretical and methodological knowledge and practical experience in the main areas of process control (including processes related to security) such as the theory of automatic control, system theory, process control, control systems, logic and event systems and also in the field of secure communication and information processing.

HEAVY CURRENT ELECTRICAL ENGINEERING

(Field of study 2675 Electrical Engineering)

The doctoral study in the study programme Heavy Current Electrical Engineering is intended for graduates of the second degree of university study (Engineer/Master/Master of Science) who tend to have an original solution to engineering and scientific problems in the field of heavy current electrical engineering, i.e. electric drives, power electronics, electric traction, electric machines and instrument and traction electrical power engineering. To solve these tasks, the doctoral student uses the latest knowledge of modern analytical and numerical methods, methods of mathematical and physical modelling, informatics, measurement of electric and non-electric variables, microelectronics, electrical power engineering, automatic and discrete control up to the level of artificial intelligence, including the implementation of control by appropriate, as well as knowledge from other fields. A prerequisite for successful completion of the doctoral degree study is the ability of doctoral student to think abstractly and his/her ability to apply and implement acquired knowledge in solving technical problems. The doctoral student will learn to correctly characterize and understand physical phenomena and experimental knowledge about these phenomena, search for their adequate models and to implement new applications in already mentioned specific disciplines, in science, research and practice. The doctoral study will enable the doctoral student to acquire comprehensive theoretical knowledge, experimental skills and practical experience, as well as to master the methodology of scientific work and prepare him / her for independent scientific work. The graduate of the doctoral study programme Heavy Current Electrical Engineering acquired knowledge based on the current state of scientific knowledge and by his/her own creative work he/she will contribute to the development of this knowledge as well as to new findings in this field.

TELECOMMUNICATIONS

(Field of study 2508 Informatics)

The aim of the doctoral degree study programme Telecommunications is to prepare qualified professionals focused on the development, implementation, management and operation of complex telecommunications systems of new generations that have virtually penetrated into all spheres of human activity. The study programme follows up on the study according to previous accreditation in the field of doctoral degree study telecommunications. Scientific and research activities of the Department of Telecommunications and Multimedia of the Faculty of Electrical Engineering and Information Technology are focused in the field of telecommunications on optical communication systems, broadband networks, mobile radio networks and digital signal processing. The graduate of the third degree study programme Telecommunications acquired deep theoretical and methodological knowledge and practical experience in key areas of telecommunications at the current state of research in the world. He/she acquired the principles of independent and team scientific work, scientific research, scientific formulation of problems, solution of complex scientific problems and presentation of scientific results. He/she is able to analyse and solve complex and non-standard tasks in the study programme telecommunications and bring original, new solutions. He/she can creatively apply acquired knowledge in practice. He /she will find professional application in various fields of science, research, industry and services in the public and private sectors. He/she is able to follow the latest scientific and research trends in telecommunications and supplement and update his/her knowledge through lifelong learning process.

THEORETICAL ELECTRICAL ENGINEERING

(Field of study 2675 Electrical Engineering)

The doctoral study in the study programme Theoretical Electrical Engineering is intended for graduates of the second degree of university study who tend to have an original solution to engineering and scientific problems in the field of Theoretical Electrical Engineering and its applications. To solve these tasks, the doctoral student uses the latest knowledge of modern analytical and numerical methods, methods of mathematical and physical modelling, informatics, measurements of electric and non-electric variables, electronics, interdisciplinary methodologies, biomedical applications, as well as knowledge from other fields. A prerequisite for successful completion of the doctoral degree study is the ability of doctoral student to think abstractly and his/her ability to apply and implement acquired knowledge in solving technical problems. The doctoral student will learn to correctly characterize and understand physical phenomena and experimental knowledge of these phenomena, to look for adequate models and to implement new applications in the above-mentioned specific disciplines, in science, research and practice. Doctoral study will enable the doctoral student to acquire comprehensive theoretical knowledge, experimental skills and practical experience, as well as to master the methodology of scientific work and prepare him / her for independent scientific work.