



# UNIVERSITY OF ŽILINA

## Faculty of Civil Engineering



# Faculty of Civil Engineering

## DOCTORAL DEGREE STUDY

### CONTACT

**University of Žilina / Žilinská univerzita v Žiline**

**Faculty of Civil Engineering / Stavebná fakulta**

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**All the questions concerning your studies will be attended at the Department of Science and Research and International Relations and Development:**

tel.: 041/513 55 49

**Coordinator for work with students with special needs:**

Ing. Janka Šestáková, PhD., Vice-dean for Education of the Faculty of Civil Engineering

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## ACCREDITED STUDY PROGRAMMES FOR THE ACADEMIC YEAR 2018/2019

DOCTORAL STUDY PROGRAMMES	
FULL-TIME STUDY	PART-TIME STUDY
STANDARD LENGTH OF STUDY 3 YEARS	STANDARD LENGTH OF STUDY 4 YEARS
Theory and Construction of Building Structures	Theory and Construction of Building Structures
Theory and Construction of Civil Engineering Structures	Theory and Construction of Civil Engineering Structures
Applied Mechanics	Applied Mechanics
Construction Technology and Management	Construction Technology and Management
<i>* the standard tuition fee for part-time study programmes is 2000 € for an academic year</i>	

**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
Theory and Construction of Building Structures / Buildings	2	1
Theory and Construction of Civil Engineering Structures / Engineering and Traffic Structures	3	1
Applied Mechanics / Applied Mechanics	1	1
Construction Technology and Management / Building Industry	2	1
<b>Total number</b>	8	4



## TERMS AND CONDITIONS OF ADMISSION

1. **The fundamental prerequisite** of being accepted to the postgraduate study program (third degree) is full completion of the second degree of the university study (Higher Education Act, n. 131/2002 Coll.).
2. **Health certificates** – the faculty does not require any health certificates and accepts all the applications without any health certificates for all degrees of the university studies.



## FORMS OF ADMISSION

At the Faculty of Civil Engineering UNIZA the fundamental condition of acceptance for the doctoral study programmes (of the third degree of university studies) in the academic year 2018/2019 is the full completion of the second degree of the university graduate study (master's degree) in the same or related field of study.

### Selection Procedure

The part of the selection procedure is an entrance examination that consists of:

- the written examination in the form of a test in one of the world foreign languages (not in the candidate's mother tongue),
- the oral examination in front of the Selection Committee of the respective field of study the content of which is to examine the candidate's knowledge, his/her professional and scientific orientation in the field he/she is applying for, including the reasons for the choice of the topic of dissertation, methods foreseen to be used when solving the topic as well as the anticipated outcomes of the dissertation.

### Rules of Selection Procedure

The selection procedure for the doctoral study at the Faculty of Civil Engineering UNIZA is regulated by the UNIZA Directive no. 110, as amended by amendment no. 1 and 2 The Study Regulations for the third degree of university studies at the University of Žilina.

A necessary condition is to submit the application form for university studies (doctoral degree - the third degree) within the stipulated deadlines under the "Notice on Selection Procedure for the Doctoral Study at the faculty of Civil Engineering UNIZA".

The course of the entrance examination is regulated by the UNIZA Directive no. 110, as amended by amendment no. 1 and 2 The Study Regulations for the third degree of university studies at the University of Žilina.

The Selection Committee issues a recommendation on the result of the selection procedure and the proposal of the successful candidates that is submitted to the Dean of the Faculty of Civil Engineering UNIZA.

The Dean of the Faculty of Civil Engineering UNIZA, after consulting with the Selection Committee and the guarantors of the study programmes of doctoral studies, makes the final decision on the result of the entrance examination and admission within 30 days from the date of the entrance examination.

## Evaluating of the results of the entrance examination

The Selection Committee evaluates the results of the entrance examinations in privately, concluding "passed" or "failed". If there have been more candidates applied for one topic of the dissertation, the Committee determines their ranking on the basis of the result of the entrance examination. When ranking, the Committee takes into account the scope and quality of the previous professional publications of each candidate and the results of his/her other professional activities (e.g. the results of students' research, professional or artistic works or competitions, his/her professional experience, etc.). At the same time the Committee determines the order of all successful candidates.



## ADMISSION OF FOREIGN STUDENTS

The same 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 for the respective academic year, which can be found on the university website.

Students from abroad who study in the Slovak language do not have to pay the tuition fee. The applicants from the Czech Republic who want to apply and study in Žilina can use the application form available in the Czech Republic. The applicants who do not actively speak Slovak or Czech are required to attend the language training. (It is possible to attend the Slovak for Foreigners courses at UNIZA).

For foreign applicants who were accepted on the basis of international agreements or Slovak government grants, terms and conditions stated in respective agreements are applicable.



## HOW TO APPLY

**Application forms are to be submitted for individual study programmes and for a topic listed by a supervisor of given study programme.**

**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 or they can also use an electronic application form that can be found on the university website: <https://vzdelavanie.uniza.sk/prijimacky/index.php> or on the education portal: [https:// prihlaskavs.sk/sk/](https://prihlaskavs.sk/sk/).

Even in case of electronic application form, it is required to print it, sign it, enclose other required documents including the proof of payment of the fee and send it to the address of the Faculty of Civil Engineering UNIZA within the stipulated deadlines.

Incomplete application form or application form sent after the deadline will not be accepted.

In the absence or failure of entrance exams, the faculty does not refund the admission fee.

If an applicant wants to take part in entrance exams at more faculties of UNIZA, the application forms have to be sent separately to each faculty and the respective admission procedure fees paid separately to each faculty.

**Enclosures for the doctoral degree programmes (to be sent with application forms):**

- Curriculum Vitae,
- certified copies of the highest level of education (the Diploma on completion of university education of the 2nd degree, the Certificate on the state examination, the Diploma Supplement). Documents issued by the Faculty of Civil Engineering UNIZA do not need to be verified.
- a list of published technical and scientific papers,
- a list of other profession activities,
- the original proof of payment of the admission fee,
- the document from the Ministry of Education, Science, Research and Sport of the Slovak Republic on the recognition of the university studies of the 2<sup>nd</sup> degree completed outside the Slovak Republic (applies to foreign and Slovak applicants who have graduated from universities of the 2nd degree abroad, including the Czech Republic).

**Admission fee:**Send **20 €** to:

Žilinská univerzita v Žiline, Univerzitná 1, 010 26 Žilina

Bank: Štátna pokladnica

IBAN: SK59 8180 0000 0070 0026 9896

const. symbol: 0308

variable symbol: 10433

**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 for the respective academic year will be announced on the website of the University of Žilina.

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: **SK59 8180 0000 0070 0026 9896**.

**USEFUL DATES**

Deadline for submitting the application form	Entrance exams
until May, 31, 2018	June, 28, 2018

**ACCOMMODATION**

Accommodation facilities of the University of Žilina offer accommodation according to their capacity and distance between the student's residence and the main location of the university campus. **Monthly fees for accommodation: 41€ - 51€.**

**BOARD**

Students can use services of catering facilities at the University of Žilina. The prices vary from **0,80 €** to **2,30 €**.

**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.

**TUITION FEES**

- full-time form of study (3 years)  
There is no fee for the standard length of study. In case of its excess there is the tuition fee specified by the UNIZA Directive, the University of Žilina (UNIZA) No. 116, Annex 1, Article 2.
- part-time form of study (4 years)  
The standard tuition fee for the part-time study programmes is specified at 2.000 € for an academic year in accordance with the Higher Education Act 131/2002 Coll. and the UNIZA Directive No. 116, Annex 1, Article 2.



### DOCTORAL STUDY PROGRAMMES

#### THEORY AND CONSTRUCTION OF BUILDING STRUCTURES

##### (Field of study 5.1.4 Buildings)

The graduates of the doctoral study are highly qualified experts in the field of study Buildings with the main focus on the theory of designing of architectural structures of buildings and their parts with theoretically justified creation of advanced covering structures and details in line with the trend of current world development. The graduates of the study programme, backed by gained theoretical engineering knowledge from the master's degree study, understand principles, masters methods in the field and are able to formulate a scientific problem, the object and purpose of the research and development in technology of architecture. They master scientific methods of research and development of architectural designs of buildings, equipment and climate imitation – creation of an artificial architectural environment of buildings and their production and technological processes in terms of their economic efficiency. They are able to clearly formulate benefits of research outputs for the development of science in the chosen field of study and for the construction and architectural practice and are capable of independent scientific work. The graduates of the study programme obtain advanced knowledge of mathematics and physics in civil engineering. They deepen the already acquired knowledge of the theory of preparation, design, construction and reconstruction of civil engineering buildings and structures. They further expand their knowledge of the diagnostics and pathology of buildings, evaluating of the energetic performance of buildings, the strategy of renewal of civil engineering buildings and also of the environmental engineering, intelligent buildings and environmental sciences. The level of knowledge ensures their ability to solve problems of the economics of buildings on a scientific basis. The graduates are able to scientifically analyse problems and provide their own solutions in the area of their qualification. The graduates of the doctoral studies can apply in particular in research institutions, science parks, research centres as single or head researchers, at universities in the development of science technology in architecture, or in corporate research and development. They are employable also in top managerial positions in project teams of different nature. They are qualified to apply in investor organisations, construction companies and in consulting and advisory companies as well.

#### THEORY AND CONSTRUCTION OF CIVIL ENGINEERING STRUCTURES

##### (Field of study 5.1.5 Engineering and Traffic Structures)

The graduates are highly qualified experts in the field of Engineering and Traffic Structures with the main focus on theory of design and analysis of engineering structures, transport and civil engineering structures and their parts. They are able to creatively apply principles of scientific research, to suggest new approaches and to improve the existing methods of the theory of civil engineering structures.

They master progressive tools of the design theory and engineering buildings, methodology of diagnostics and rehabilitation of constructions. Their theoretical knowledge gained in the course of the study can be applied in the experimental analysis of behaviour of civil engineering buildings and in their combination with model solutions and results of numerical simulations. The graduates of the doctoral studies can mainly apply in research institutions, science parks, research centres as independent or head researchers, at universities in the development of science of engineering constructions and transport structures, or in corporate research and development. They can apply in top managerial positions and in project teams of different nature. They also find application in investor organisations, construction companies, in consulting and advisory companies. The content and structure of the study programme follows the curriculum of the master's degree study at the Faculty of Civil Engineering UNIZA in the field of study of Engineering and Traffic Structures. They correspond with the structure and scope of the Slovak Chamber of Civil Engineers required to qualify for the profession of an authorized engineer. Completion of the study programme and the achievement of higher education of the third degree provide the graduate with sufficient basis upon which, after appropriate experience following the graduation, he/she can apply for the appropriate authorisation.

#### APPLIED MECHANICS

##### (Field of study 5.1.7 Applied Mechanics)

The graduates are highly qualified experts in the field of Applied Structural Mechanics, focusing particularly on the development of numerical models of building structures and their solutions utilising modern methods of calculation and the experimental analysis and diagnostics of these structures. The graduates receive broad theoretical basis in the field of

modelling of static, dynamic, linear and nonlinear problems of the theory of structures based on modern numerical calculation methods and application of currently existing software engineering tools. They master new procedures, methods and tools applied in the design and construction of complex mechanical systems and building constructions as well as their diagnostics and experimental analysis. The graduates find employment in research and design organisations. They can apply mainly when solving specific and particularly technically challenging engineering projects. They are employable also in scientific and research institutions and universities.

## **CONSTRUCTION TECHNOLOGY AND MANAGEMENT**

### **(Field of study 5.2.8 Building Industry)**

The graduates are highly qualified experts in civil engineering with the main focus on the theory of Construction Technology and Management. They master scientific methods of research, and are able to creatively apply the existing methods and theories in the field. They are able to apply theoretical knowledge gained by studying of the research methodology in the preparation and realisation of scientific experiments. They are able to perform research activities with regard to ethical and social aspects of scientific activities and their contribution to practice. They master progressive methods of mathematical and computer simulations based on which they are able to optimise system design of construction technology.

The graduate is capable of using the knowledge of probability theory and diagnostics when designing optimisation of maintenance, repair and reconstruction of buildings. He/she is able to optimise technological processes in relation to the life cycle of buildings, their lifetime as well as the environmental aspects. The graduate is able apply knowledge in order to improve operational safety of road constructions. The graduates can apply in investor organisations of the governmental administration, regional authorities and municipalities, in the construction companies, in consulting and advisory companies, in research organisations and governance structures. The graduates are employable in the sphere of investment preparation, preparation and construction of buildings, economic analysis and case studies and asset management. The graduates can also apply in the preparation and management of investment projects in building industry. They are competent to work in scientific and research institutions and universities, too. Completion of the study programme and the achievement of higher education of the third degree provide the graduate with sufficient basis upon which, after appropriate experience following the graduation, he/she can apply for the appropriate authorisation.