



# UNIVERSITY OF ŽILINA

## Faculty of Civil Engineering

### FACULTY OF CIVIL ENGINEERING

### MASTER'S DEGREE STUDY

#### CONTACT

##### Faculty of Civil Engineering / Stavebná fakulta

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**All the questions concerning your studies will be attended at the Department of Studies:** tel.: 041/513 55 12

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

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## ACCREDITED STUDY PROGRAMMES FOR THE ACADEMIC YEAR 2017/2018

MASTER'S STUDY PROGRAMMES	
FULL-TIME STANDARD LENGTH OF STUDY 2 YEARS	PART-TIME * STANDARD LENGTH OF STUDY 3 YEARS
Load-Bearing Structures of Buildings	-
Building Constructions	-
Highway Engineering	Highway Engineering
Engineering and Traffic Structures	Engineering and Traffic Structures
Objects of Transportation Engineering	Objects of Transportation Engineering
Transport Infrastructure Planning	Transport Infrastructure Planning
Railway Engineering	Railway Engineering
Construction Technology and Management	Construction Technology and Management
<i>* the standard tuition fee for part-time study programmes is 900 € 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>.



## FOLLOW-UP STUDIES AFTER COMPLETION OF MASTER DEGREE STUDIES

- There is a possibility of extended studies within follow-up doctoral degree programmes at the Faculty of Civil Engineering UNIZA in the academic year 217/2018 in the following study programmes Theory and Construction of Building Structures, Theory and Construction of Civil Engineering Structures, Applied Mechanics, Construction Technology and Management (respective information about particular study programmes is available at the university website).

EXPECTED NUMBER OF ACCEPTED APPLICANTS TO THE FIRST YEAR: MASTER 'S DEGREE STUDY		
STUDY PROGRAMME / FIELD OF STUDY	PLANNED CAPACITY	
	FULL-TIME	PART-TIME
Bearing Structures of Buildings / Buildings	20	-
Building Constructions / Buildings	20	-
Highway Engineering / Engineering and Traffic Structures	does not open	does not open
Engineering and Traffic Structures / Engineering and Traffic Structures	60	20
Objects of Transportation Engineering / Engineering and Traffic Structures	does not open	does not open
Transport Infrastructure Planning / Engineering and Traffic Structures	20	10
Railway Engineering / Engineering and Traffic Structures	does not open	does not open
Construction Technology and Management / Building Industry	30	10
Total number	150	40



## TERMS AND CONDITIONS OF ADMISSION

1. **The fundamental prerequisite** of being accepted to the graduate study programme (second degree) is full completion of the first degree of the university study or the second degree of the university study, whereas the sum of the achieved credits for the previous completed university study and the sum of credits necessary for a successful completion of the second degree study programme the applicants is applying for has to reach at least 300 credits.
2. **Language competence** – written and oral command of Slovak or Czech (level B1) is required for study in the study programmes that the Faculty provides in the Slovak language. Mastering of at least one of the world languages (English, German, French) is welcome; for the study in study programmes that the Faculty provides in English written and oral command of English at least at the B1 level is required.
3. **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

### 1. No entrance exams

- For study in master 's study programmes the Faculty of Civil Engineering UNIZA will admit the applicants on the basis of their previous study results achieved in the undergraduate study without any entrance examination. The number of applicants admitted without entrance examination will be determined in a way so that it does not exceed the planned capacity of the admitted students in the first year of respective study programme.

## 2. Selection Procedure

- selection procedure is carried out in a form of an interview in order to ensure that the accepted candidates dispose of the necessary skills and abilities,
- selection procedure is carried out without personal participation of the candidate.

### Rules of Selection Procedure

The Faculty of Civil Engineering UNIZA admits undergraduates of the same or related field of study. Relatedness is defined in the description of a respective field of study as stated by Accreditation Commission. In case, it is not possible to clearly determine the relatedness of study fields, the decision on the admission is made by the admission committee.

The Faculty of Civil Engineering UNIZA does not accept candidates who have already studied in any of the bachelor's study programmes at the Faculty of Civil Engineering UNIZA and have failed twice or more times so far. Moreover the Faculty does not accept those students who have been excluded from the study at the Faculty of Civil Engineering UNIZA under disciplinary proceedings under Art. 2 of the Disciplinary Regulations for students of the University of Zilina.

The study in the master's degree study programmes in the part-time form of study will be opened only if there are at least 5 candidates who meet the admission requirements in the respective study programme.

The Dean of the Faculty of Civil Engineering is authorised to meet the final decision on the outcome of the admission procedure based on the proposal of the admission committee of the Faculty of Civil Engineering UNIZA.

It is the responsibility of the dean of the Faculty of Civil Engineering UNIZA to complete the number of admitted students for the study programmes in the first year of the master's study up to the anticipated number of candidates from those candidates who:

- meet the conditions for acceptance in another bachelor's study programme but were not accepted due to the full capacity of the initially chosen study programme,
- meet the conditions for acceptance in another bachelor's study programme that is not going to be opened due to the fact that there are less than 5 candidates who have met the admission requirements.

Those applicants for study have to meet the admission requirements stated for the replenishing study programme, too.

In selected study programmes of the master's degree study programmes, in the case of vacant places, there will be the second round of the admission procedure organised as well. The list of master's degree study programmes for the second round of the admission procedure will be published by July, 14, 2017.

The terms, conditions and the form of admission procedure for undergraduate study are the same as in the first round of the admission procedure.



## 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

**If the applicant wishes to apply for more than one graduate (master's) study programme provided at the Faculty of Civil Engineering UNIZA, it is satisfactory to indicate their order of preference in one application form submitted. If interested in both forms of study (full- and part-time forms), it is necessary to submit two application forms and to cover two admission procedure fees.**

Applicants have to fill in the form Prihláška na vysokoškolské štúdium - 2. 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/>.

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 study application or application sent after the deadline will not be accepted.

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 master's degree programmes (to be sent with application forms):**

- Curriculum Vitae,
- proof of payment of the admission fee,
- copy of the Diploma,
- information on the results of the previous study:

### **Admission fee:**

Send 20 € to:

Žilinská univerzita, Univerzitná 1, 010 26 Žilina

Bank: Štátna pokladnica

IBAN: SK59 8180 0000 0070 0026 9896

const. symbol: 0308

variable symbol: 10432 - inžinierske 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 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

Open Day	Deadline for application form submission 1 <sup>st</sup> round / 2 <sup>nd</sup> round	Entrance exams 1 <sup>st</sup> round / 2 <sup>nd</sup> round
February, 8, 2017	until May, 31, 2017 from July, 21, 2017 to August, 14, 2017	July, 10, 2017 August, 25, 2017



## 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

Students of all study programmes can obtain motivational scholarships (for excellent results or exceptional achievements) in accordance with the stated criteria. **Students of selected study programmes can obtain motivational departmental scholarships in accordance with the stated criteria.**



## GRADUATE PROSPECTS

### MASTER'S STUDY PROGRAMMES

#### LOAD-BEARING STRUCTURES OF BUILDINGS

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

The graduate's profile is designed so that it covers all the legal requirements needed to operate in the design and implementation of buildings, focusing on their bearing structures. The study programme is based on its content focusing mainly on preparation of the graduate in the field of theoretical analysis of bearing structures of buildings and some engineering structures as well. It also includes research training activities with a reasonable degree of creativity and independence that the graduate can deepen and expand in his/her further studies. After successful completion of the study program the graduate is ready for the further doctoral studies in the field of study Buildings or he/she is able directly enter the labour market. He/she is employable as an independent expert specialist in statics, a member of a creative team, in building supply organisations, in the educational system as well as in research. He/she can also work on the basis of a trade license and after years of the prescribed practice and successful completion of examinations he/she can become an authorized civil engineer. By completion of the study programme and reaching the master's degree the graduate gets qualified to exercise a regulated profession. After completing the appropriate work experience and examination in front of the Examining Board of the Slovak Chamber of Civil Engineers (SCCE) the graduate may be authorized to act as an "authorized civil engineer". The content and structure of the study programme corresponds with the structure and scope of the core subjects required by SCCE to qualify for the profession of an authorized (chartered) civil engineer in the category I3 - engineer for static structures, namely for buildings, engineering constructions and geotechnics.

## **BUILDING CONSTRUCTIONS**

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

The graduates obtain adequate scientific education and basic knowledge of social and economic disciplines; understand and acquire relevant knowledge, concepts, principles and theories of architectural constructions and the theory of environmental engineering and other engineering disciplines based on their ecological, material, static, physical, energetic, technological, economic and managerial nature. They are able to utilise this knowledge in their professional activities, understand the implications and consequences of alternative solutions and master their optimisation. They are able to use reasonable theories, criteria, practices and tools for specifying, analysing and solving technical and technological as well as economic and managerial problems of complex preparation and construction of buildings with understanding and accepting of their character. The graduates obtain technical and architectural education and are able to creatively cooperate with all partners of the project and specialists of all professions of project documentation of civil engineering constructions. They can creatively apply knowledge of natural sciences, humanities and engineering disciplines in the process of designing, analysing and assessing buildings. Their skills allow them to participate in the design, engineering, implementation and supervision of less demanding civil engineering construction. They are qualified to apply as designers in design and manufacturing companies, as technologists, economists - fiscalists and construction managers in implementation companies, technicians in government departments and territorial units and investor bodies, in the preparation and the implementation phases of civil engineering constructions, in construction in the field of environmental protection, in operation management and maintenance of buildings and the like. The content and structure of the study programme corresponds with the structure and scope of the subjects required by the Slovak Chamber of Civil Engineers as core subjects in the first degree of university studies, so that after successful completion of the second degree studies the graduate is able to qualify for the profession of an authorized civil engineer in the category I3 - engineer for the statics of constructions, namely for buildings, engineering structures and geotechnics.

## **ENGINEERING AND TRAFFIC STRUCTURES**

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

The graduate is able to analyse, design, construct and maintain engineering and transport structures, to carry out research with a high degree of creativity and independence. The graduates obtains deep knowledge in the field of bearing structures analyses, enabling him/her to design, maintain, reconstruct safe, useable, durable and aesthetic constructions. The study programme is focused on the acquisition of theoretical and practical knowledge and on the development of the graduate's ability of his/her creative application when performing the profession. The graduate in the second degree studies masters principles and methods of analysis of bearing structures of civil and transport constructions, principles of their design, diagnosis and evaluation. When solving problems in different areas he/she is able to utilise the gained experience with the application of the available software tools. In addition to such knowledge and abilities he/she has obtained knowledge of economics of constructions, their preparation and management as well as the impact of buildings on the environment. The graduates are competent to perform the career of a designer, and later an authorised engineer in the design and execution of civil engineering and transport constructions. They can also apply in the preparation of investment construction engineering activities, in construction, management, operation and maintenance of transport infrastructure (roads, highways, urban roads, airports, railways and stations, bridges and underground structures). They can apply for positions in the drawing engineer's offices, investment bodies, construction companies, in the state and public administration. By completion of the study programme and reaching the master's degree the graduate gets qualified to exercise a regulated profession. After completing the appropriate work experience and examination in front of the Examining Board of the Slovak Chamber of Civil Engineers (SCCE) the graduate may be authorized to work as an "authorized civil engineer". The content and structure of the study programme corresponds with the structure and scope of the core subjects required by SCCE to qualify for the profession of an authorized civil engineer in the category I3 - engineer for the statics of constructions, namely for buildings, engineering structures and geotechnics.

## **TRANSPORT INFRASTRUCTURE PLANNING**

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

The graduate is able to analyse, design and operate civil engineering structures and with a reasonable degree of autonomy and creativity to carry out research. He/she obtains necessary theoretical knowledge in the field of analysis and design of transport engineering structures, enabling him/her to propose a secure and reliable structures and sustainable land-use systems. He/she acquires necessary knowledge of planning and evaluating of transport infrastructure, stability and ecological sustainability of the territory/region. He/she gains the ability to identify and assess the development potential of territorial regions, at both basic and superior levels, ability to plan and projects transport infrastructure and its various components, and to manage the implementation of planned activities in order to ensure sustainable development in all aspects. He/she is competent to organisationally and professionally handle the pre-project, project,

management and scientific research expertise activities in the field of transport infrastructure, he/she is qualified to pass the admission requirements for the doctoral degree studies. He/she obtains the ability to work with leading technologies and software tools. After a reasonable practice he/she gains the ability to manage, secure, coordinate and provide comprehensive management of transport infrastructure. He/she can apply in planning, design and management of transport infrastructure as a designer and a manager, in the preparation of extensive investment construction, engineering activities and in public administration at the level of the state and/or a municipality. He/she can apply in drawing engineering offices, investment departments, in the state and public administration. After obtaining the necessary work experience he/she can apply for managerial positions, in the business sector, in organisations dealing with integrated transport system, in research and education at secondary schools and universities. He/she can work as a freelancer on the basis of a trade license. The content and structure of the study programme corresponds with the structure and scope of the core subjects required by the Slovak Chamber of Civil Engineers (SCCE) to qualify for the profession of an authorized engineer. Completion of the study programme and the master's degree form a sufficient basis upon which, after appropriate work experience, the graduate may apply for the relevant authorisation.

## **CONSTRUCTION TECHNOLOGY AND MANAGEMENT**

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

The graduates are qualified experts in the field of technology, management and economics of construction, testing, quality management and performance management with a special focus on engineering and building construction. They are able to independently prepare and manage the construction of complex engineering and civil engineering works, to manage the building materials production, to run their own construction companies, to carry out research with a high degree of creativity and independence. They can manage employees and lead working groups operating on large projects. They are able to analyse and solve problems of building production, optimise construction procedures and introduce new technologies in the construction processes. Acquired theoretical and practical knowledge help the graduate of the master's degree studies to apply especially in the preparatory phase of the investment process and the preparation and construction of complex engineering, land and water constructions. The graduate obtains the ability to analyse the variant possibilities of technological processes and their application at the time of preparation of project documentation and in implementation phase, to competently manage change processes technology in terms of innovation, to assess the quality of building materials, technological processes and structures, to test materials, composite materials and constructions, to manage construction of buildings, to apply optimal practices with regard to the economics and quality, to carry out an economic analysis of the construction process and to apply principles of economic management. The graduate can work independently as a senior manager in compliance with the principles of ethics and morality. The graduate applies in the field of theory of technology and building materials, preparation and construction management, investment project preparation, testing, quality management and power control management of transport, engineering and civil engineering constructions. The graduates are prepared for work directly on the building site, in preparation but also in management. He/she is able to manage a construction company independently, after a reasonable practice he/she is qualified to lead projects and work teams for major projects. He/she can apply in analysis and optimization activities, is able to participate in solving research projects in basic and applied research. He/she can work as a freelancer on the basis of a trade license. By completion of the study programme and reaching the master's degree the graduate gets qualified to perform a regulated profession. After completing the appropriate work experience and examination in front of the Examining Board of the Slovak Chamber of Civil Engineers (SCCE) the graduate may be authorized to act as an "authorized civil engineer". The content and structure of the study programme corresponds with the structure and scope of the core subjects required by SCCE to qualify for the profession of an authorized civil engineer within a newly prepared legislative in the category I6 - Engineer for investment preparation and quality assurance engineering.