UNIVERSITY OF ŽILINA
Faculty of Electrical Engineering

CONTACT

Faculty of Electrical Engineering / Elektrotechnická fakulta
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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

Institute of Aurel Stodola in Liptovský Mikuláš
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ACCREDITED STUDY PROGRAMMES
FOR THE ACADEMIC YEAR 2017/2018

BACHELOR´S DEGREE STUDY PROGRAMMES	
FULL-TIME STUDY LENGTH OF STUDY 3 YEARS	**PART-TIME STUDY **** LENGTH OF STUDY 4 YEARS
Automation	-
Autotronics	-
Biomedical Engineering	-
Digital Technologies	Digital Technologies
Electrical Engineering	-
Multimedia Technologies*	-
Telecommunications	-
* study programme is accredited also in the English language *** standard tuition fee for part-time study programmes is 500 € for an academic year*	

Note:
- Bachelor´s degree study programme Digital Technologies is taught only at the Institute of Aurel Stodola in Liptovský Mikuláš.
- In the study programme Electrical Engineering, by the selection of the optional courses, the students may specialise in one of the following areas: Car Electrical Engineering, Electric Drives, Electric Power Systems, Power Electronic Systems and Mechatronic Systems.

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 BACHELOR'S DEGREE STUDIES

- There is a possibility for continuing bachelor´s degree studies within follow-up master´s degree study programmes at the Faculty of Electrical Engineering UNIZA – Applied Telematics, Biomedical Engineering, Electric Power Systems, Electric Drives, Photonics, Process Control, Telecommunications and Radio-communications Engineering, Multimedia Engineering, Power (and) Electronic Systems (respective information about particular study programmes is available at the university website).

EXPECTED NUMBER OF ACCEPTED APPLICANTS TO THE FIRST YEAR: BACHELOR´S DEGREE STUDY		
STUDY PROGRAMME / FIELD OF STUDY	**PLANNED CAPACITY**	
	FULL-TIME	**PART-TIME**
Automation / Automation	60	-
Autotronics / Electrical Engineering	40	-
Biomedical Engineering / Biomedical Engineering	40	-
Digital Technologies / Telecommunications	80	30
Electrical Engineering / Electrical Engineering	120	-
Multimedia Technologies / Telecommunications	40	-
Telecommunications / Telecommunications	100	-
Total number	480	30

TERMS AND CONDITIONS OF ADMISSION

1. **The fundamental prerequisite** of being accepted to the undergraduate study program (first degree) is the full completion of secondary education (Higher Education Act, n.131/2002 Coll.).
2. **Language competence** – written and oral command of Slovak or Czech. Studying at the faculty, including the opportunity of spending a part of your study abroad, calls for a need of mastering at least one of the world languages (English, German, Spanish, French).
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

The Faculty will accept all the applicants (except applicants for the study programme Multimedia Technologies) who meet at least one of the following criteria:

- the secondary grammar school leavers and the secondary vocational school leavers of electrical fields with the average marks in Mathematics and in Physics in their annual secondary school certificates up to 2,00 inclusive,
- the secondary grammar school leavers and the secondary vocational school leavers of electrical fields who passed the school leaving exam in Mathematics or in Physics with the final mark not worse than "very good".

- In case, the applicant for the university study at the Faculty of Electrical Engineering UNIZA participates and succeeds in the subject competition (olympiáda) in Mathematics, Physics, Informatics and Electrical Engineering (district round), in secondary school subject competitions concerning Electrical Engineering and Informatics/Computer Sciences (ŠVOS) and in other competitions in the field of electrical engineering, the Faculty will consider it in the admission process.

2. Selection procedure

All the other applicants who do not meet the above stated criteria and all the applicants for the study programme Multimedia Technologies will undergo the selection procedure.

- In the selection process, the study results in Mathematics and Physics achieved during secondary school study are being assessed , whereas the type of the secondary school will be considered as well,
- The applicant´s personal attendance at the selection procedure is mandatory for the study programme Multimedia Technologies. The applicants for the study programme Multimedia Technologies attend the interview focused on findings of their conditions for the study in the field (orientation in the field of multimedia technologies),
- For all other study programs no personal participation is needed (no entrance examinations take place).

Rules of Selection Procedure

The applicants will be ranked in the order according to the study results achieved exclusively in Mathematics and Physics at their secondary school. The number of points is determined by multiplying the final average specified by the marks in the annual secondary school certificates and the school leaving certificate in Mathematics and Physics and a coefficient reflecting the type of secondary school TS and a number 100.

The coefficient of the type of school:

Secondary Grammar School	TS = 1
Secondary Vocational School, electrical fields:	Ts = 1.1
Secondary Vocational School, non- electrical field:	Ts = 1.5

For the applicants for the study program Multimedia Technology, the resulting number of points is moreover multiplied by a coefficient MT, which has a value of 1 or 1.5 (depending on the success at the interview).

Applicants with the lowest ranking will be prioritised when accepting.

The Faculty accepts applicants based on their ranking until the planned capacity is reached. The study in individual study programmes will be opened only if there is a sufficient number of applicants.

The applicants shall indicate in the application the name of only one bachelor´s degree of study he/she is applying for.

The Dean of the Faculty of Electrical Engineering UNIZA is authorised to add the number of prospective students of the respective bachelor´s study programmes up to the set capacity of enrolled students of the first year of undergraduate study from those applicants who meet conditions for being accepted for a different study programme but were not accepted due to its full capacity.

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.

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 - 1. 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 EF UNIZA within the stipulated deadlines.

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

In the absence of or a 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 bachelor´s degree programmes (to be sent with application forms):

- Curriculum Vitae,
- proof of payment of the admission fee,
- copies of annual secondary school certificates.

After passing the final secondary school exams, the applicants will send **the copy of the final exam certificate** as well as **the copy of the last annual secondary school certificate**. The deadline for sending these documents will be announced to all applicants individually by mail.

Admission fee:
Send 20 € to: Žilinská univerzita, Univerzitná 1, 010 26 Žilina

Bank: Štátna pokladnica

IBAN: SK74 8180 0000 0070 0026 9917

const. symbol: 0308

variable symbol: 10331 - bakalárske štúdium

Payment method: the payment can be paid by bank transfer or postal order to the account above.

Proof of payment: the proof of payment is to be sent to the Faculty with the application form.

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: **SK74 8180 0000 0070 0026 9917.**

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.

USEFUL DATES

Open Day	Deadline for application form submission	Entrance exams
February, 9, 2017	until April, 30, 2017	June, 19, 2017

ACCOMMODATION

All the students of the first year of the bachelor degree studies are entitled to accommodation in accordance with the internal regulations of the university. **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

BACHELOR´S STUDY PROGRAMMES

AUTOMATION

(Field of study 5.2.14 Automation)

The graduate will acquire education in the field of automation and process control with the support of information and communication technologies. He/she has also practical experience in application of safety critical control and communication systems performed mainly based on PLC and industrial networks. He/she will successfully apply in the operation of control and information systems at the process and operative level. Theoretical knowledge acquired during the bachelor study will create good prerequisites for further education, either within the further forms of university study or within lifelong education.

Software skills: C language, C++, MATLAB, PLC, ATMEL, MS ACCESS, HTML, CSS, Tia Portal.

AUTOTRONICS

(Field of study 5.2.9 Electrical Engineering)

The graduate will acquire basic and general knowledge required in wide spectrum of electrical proficiency especially in areas of automobile electronics, hybrid vehicles and electromobility. The gained knowledge is needed for the second degree study programmes in this study programme or affinitive ones. Even if the graduate does not continue in the next level of the university studies, he/she will gain required wide professional profile and he/she is able to adapt in different technical or other businesses. The graduates of Autotronics study programme should be professionals who are able to identify various electronic faults in cars. They can successfully apply mainly in car services and repair workshops, car selling shops and in education institutions.

Software skills: C language, C++, MATLAB, Simulink, CodeWarrior, CodeComposer, Asembler, AVR Studio, Vissim, PLECS.

BIOMEDICAL ENGINEERING

(Field of study 5.2.47 Biomedical Engineering)

The graduate will acquire knowledge in the subjects of a theoretical and technical basis, as well as in a theoretical basis of medical disciplines with emphasis on the structure and functioning of biological objects, biochemical, physiological and pathophysiological processes. He/she will gain knowledge of medical technique and its applications, modern tools of biomedicine, principles of their activities, conditions for operation and their safe utilisation for diagnostic and treatment purposes. He/she is able to evaluate functionality of technical and computer aided equipment under given conditions of a health care facility or other operations and laboratories and at the same time able to lead qualified communication with the health care staff. He/she will successfully apply as an expert in medical and biological laboratories, in the operation of biomedical technique, in business and service organisations.

Software skills: C language, MATLAB, EAGLE.

ELECTRICAL ENGINEERING

(Field of study 5.2.9 Electrical Engineering)

The graduate will acquire knowledge of the subjects of theoretical base applied in the fields of power electronics, utilisation of applied microprocessor technique and programming, electric drives, electrical traction, electric power systems and mechatronics. He/she will gain knowledge in the field of quality management and reliability in a production company, marketing and trade, electrical standards, law and legal regulations related to the field of study. Graduates may further specialise in the field of automobile electrical engineering, electrical traction, electric drives, electric power systems, and power electronic systems and mechatronics systems. Graduates obtain theoretical knowledge and practical experience in order to acquire the principles, installations, operations, functions, service and repairs of electrical products, devices and equipment in compliance with international standards. He/she will successfully apply in all fields of power electrical engineering, in the field of mechatronics, robotics, applied microprocessor technique, electronics, optoelectronics, power electronics, computer design and construction in organisations of administrative, production, operation or repair character.

Software skills: MS Office, MATLAB, SIMULINK, FEMM, MOTORSOLVE, SICHR, DIALUX, DSPACE, CODE WARIOR, LABWIEV, EMPT-ATP, MODES, GE-PSLF, RUPLAN, RS Logix, RS Link, RS View, Assembler, AVR Studio, EAGLE, OrCAD-PSPICE, PLECS.

DIGITAL TECHNOLOGIES

(Field of study 5.2.15 Telecommunications)

The graduate will acquire knowledge from the basic disciples in the field oriented to general professional knowledge in the area of digital technologies, electronics, optoelectronics, communication systems, networks and services, transmission media to be connected with obtaining practical experience in the field of digital technologies, mainly information processing, transmission and communication systems. He/she will gain experience and skills in the field of digital system operation. Apart from that, he/she will acquire basic legal, economic and managerial knowledge to be utilised in the field of digital system services, digital security and language skills including specific terminology. The graduate will apply successfully as a technician, technologist or manager of technician team, administrator of digital devices and systems.

Software skills: C language, C++, PHP, JavaScript, MySQL, Flash animations, Code Blocks, LabView, PHPMyAdmin, MySQLWorkbench, ILEAD GIF Animator, XARA X, ADOBE Imagereak, Adobe After Effects, AVI 3d studio, DiagramDesigner, HTML Kit.

MULTIMEDIA TECHNOLOGIES

(Field of study 5.2.15 Telecommunications)

The graduate will acquire knowledge in acquisition, processing and presentation of digital signal at an adequate technical, aesthetical, ethical and art levels. The synergy of technical and art education will make the graduate a specialist in creating multimedia presentations. The graduate will gain knowledge and practical experience in working with the screen and the sound element of multimedia that predetermines him/her for work in organisations focused on information technologies, advertising and counselling activities, in public administration institutions, in studios producing multimedia products.

Software skills: C language, C++, MATLAB, Java, JSP, Blender, Cinema 4D, Adobe Premiere, Adobe Audition, Adobe Photoshop, Adobe Illustrator, Adobe InDesign, Protools, HW, SQL, PSpice, Microsim, Corel Draw, QuarkxPress, LaTex.

TELECOMMUNICATIONS

(Field of study 5.2.15 Telecommunications)

The graduate will acquire necessary theoretical and specific knowledge, information on technologies and methods in the field of transmission and processing of all information types, on the structure and operation of respective equipment and systems of fixed and mobile networks. He/she has knowledge in information technology utilisation in the given field, as well as knowledge in economics, management, psychology and legal regulations. He/she may successfully operate in companies focused on the area of communication and information technologies as an executive and managing employee.

Software skills: C language, C++, MATLAB, Java, JSP, Blender, 3dMax, Cinema 4D, Audition, Protools, Premierepro, HW, Adobe InDesign, SQL, PSpice, Microsim, Adobe Illustrator, Corel Draw, QuarkxPress, LaTex, Blender, 3dMax, Cinema 4D, Photoshop, MS Office, MATLAB, SIMULINK, from SPICE family – simulation programs focused on analyses and syntheses of electronic circuits, EAGLE, LabView, VPIphotonics.