



Courses in English for Erasmus+ exchange students

2024/ 2025



UNIVERSITY OF ŽILINA
Faculty of Electrical Engineering
and Information Technology

Erasmus ID Code
SK ZILINA01

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Bc. Degree

Winter Semester

Code	Course Title	Study programme	ECTS	Department	Language
3B00104	Algorithmisation and programming	Automation	5	DCIS	English
3B0A302	Communication Networks	Automation	5	DCIS	English
3B00305	Theory of automatic control	Automation	6	DCIS	English
3B0A501	Control System Programming	Automation	5	DCIS	English
3B0A503	Information systems	Automation	6	DCIS	English
3B0A502	Theory of signal processing in process control	Automation	6	DCIS	English
3B00102	Electrical Circuits 1	All study programmes	4	DEBE	English
3B0B302	Acquisition and Analysis of Biosignals	Biomedical Engineering	3	DEBE	English
3B0B303	Algorithmization of tasks in biomedical engineering	Biomedical Engineering	3	DEBE	English
3B0B503	Microcontrollers in biomedical engineering	Biomedical Engineering	7	DEBE	English
3B00304	Electronics 1	Electrical engineering	5	DME	English
3B00306	Autotronics	Electrical engineering	5	DME	English
3B0D502	Power semiconductor converters 1	Electrical engineering	5	DME	English
3B0D509	Logic circuits	Electrical engineering	5	DME	English
3B0D510	Design of electrical devices	Electrical engineering	5	DME	English
3B00310	Programming in Java	Communication and Information Technologies Multimedia Technologies	5	DMICT	English
3B00309	Introduction to signals and systems	Communication and Information Technologies Multimedia Technologies	6	DMICT	English
3B0E301	Communication Technologies	Communication and Information Technologies Multimedia Technologies	6	DMICT	English
3B00506	Computer networks 2	Communication and Information Technologies	7	DMICT	English
3B00507	Electroacoustic	Communication and Information Technologies Multimedia Technologies	5	DMICT	English
3B00509	Wireless Systems	Communication and Information Technology	4	DMICT	English
3B0H301	Modeling and simulation of physical processes	All study programmes	5	DPh	English
3B0H507	Introduction to fibre optics	All study programmes	5	DPh	English
3B0H502	Physics of materials and structures	All study programmes	6	DPh	English
3B0D304	Basics of power lines' operation	Electrical Engineering	5	DPSED	English
3B0D506	Electrical apparatus	Electrical Engineering	5	DPSED	English
3B0D508	Introduction to electric traction	Electrical Engineering	5	DPSED	English
3B0D503	Electric drives 1	Electrical Engineering	5	DPSED	English
3B0D504	Renewable energy sources	Electrical Engineering	5	DPSED	English
3B0D505	Electric machines 2	Electrical Engineering	5	DPSED	English

Summer Semester

Code	Course Title	Study programme	ECTS	Department	Language
3B0A201	Object-oriented Programming	Automation	4	DCIS	English
3B0A202	Computer hardware and software	Automation	5	DCIS	English
3B00403	Sensor Technology	Automation	5	DCIS	English
3B0A404	Theory of information and signals	Automation	7	DCIS	English
3B0A401	Control systems	Automation	6	DCIS	English
3B0A403	Actuators and their control	Automation	5	DCIS	English
3B0A601	Automatic identification	Process Control	5	DCIS	English
3B00202	Electrical Circuits 2	All study programmes	6	DEBE	English
3B0B404	Basics of signal processing in BME	Biomedical Engineering	5	DEBE	English
3B0B401	Design and Construction of Medical Devices	Biomedical Engineering	6	DEBE	English
3B0B407	Basics of 3D printing in biomedicine	Biomedical Engineering	3	DEBE	English

3B0B402	Sensors and Measuring Methods in Biomedicine	Biomedical Engineering	6	DEBE	English
3B0D406	Microprocessor systems 1	Electrical engineering	5	DME	English
3B0D413	Electronics 2	Electrical engineering	5	DME	English
3B0D605	Power semiconductor systems	Electrical engineering	5	DME	English
3B00208	Scripting languages in ICT	Communication and Information Technologies	5	DMICT	English
3B0E206	Transmission media	Communication and Information Technologies	5	DMICT	English
3B0E405	Multimedia Signal Processing	Communication and Information Technologies	5	DMICT	English
3B00407	Computer networks 1	Communication and Information Technologies/Multimedia technologies	5	DMICT	English
3B0G408	Studio technology	Multimedia Technologies	6	DMICT	English
3B00605	Internet of Things	Communication and Information Technologies	5	DMICT	English
3B00203	Mechanics	All study programmes	7	DPh	English
3B0D408	Basic of Electric machines	Electrical Engineering	5	DPSED	English
3B0D403	Conventional power generation	Electrical Engineering	5	DPSED	English
3B0D405	Electric machines 1	Electrical Engineering	5	DPSED	English
3B0D606	Electric drives 2	Electrical Engineering	4	DPSED	English

MSc. Degree

Winter Semester

Code	Course Title	Study programme	ECTS	Department	Language
3I0A101	Advanced Methods of Automatic Control	Process Control	7	DCIS	English
3I00104	Artificial intelligence	Process Control	6	DCIS	English
3I0A304	Information Systems Security	Process Control	5	DCIS	English
3I00306	Embedded System Design	Process Control	6	DCIS	English
3I0D101	Bioelectromagnetism	Biomedical Engineering	5	DEBE	English
3I0D105	Modelling and Simulation of Electronic Circuits and Systems in Biomedicine	Biomedical Engineering	6	DEBE	English
3I0D102	Signal Processing in Medicine	Biomedical Engineering	7	DEBE	English
3I0D104	Wave Processes in biomedicine	Biomedical Engineering	6	DEBE	English
3I0D103	Medical Electronics 1	Biomedical Engineering	6	DEBE	English
3I0D302	Information Systems in Medicine	Biomedical Engineering	6	DEBE	English
3I0D301	Applied Optoelectronics in Medicine	Biomedical Engineering	7	DEBE	English
3I00105	Virtual instrumentation 1	Electrical engineering	5	DME	English
3I0G101	Electromobility	Electrical engineering	5	DME	English
3I0G108	Traction batteries and charging infrastructure	Electrical engineering	5	DME	English
3I0G111	Power semiconductor converters 2	Electrical engineering	5	DME	English
3I0G107	Python for scientific computations	Electrical engineering	5	DME	English
3I0G306	Application of power electronics	Electrical engineering	5	DME	English
3I0G311	Image processing and computer vision	Electrical engineering	5	DME	English
3I0G312	Communication buses in automotive	Electrical engineering	5	DME	English
3I0G302	Design and construction of power semiconductor systems	Electrical engineering	5	DME	English
3I0H106	Room acoustics	Multimedia Engineering	5	DMICT	English
3I0H105	3D Applications Design	Multimedia Engineering	5	DMICT	English
3I0J106	Higher programming languages	Telecommunication and Radiocommunication Engineering	5	DMICT	English
3I00102	Digital signal processing	Telecommunication and Radiocommunication Engineering Multimedia Engineering	5	DMICT	English
3I0J302	Radiocommunication systems and networks 2	Telecommunication and Radiocommunication Engineering	5	DMICT	English
3I0J311	Digital image processing	Telecommunication and Radiocommunication	6	DMICT	English

		Engineering Multimedia Engineering			
3I0C101	Semiconductor and semiconductor structures	All study programmes	6	DPh	English
3I0C104	Photonics	All study programmes	6	DPh	English
3I00303	Laser and laser systems	All study programmes	6	DPh	English
3I0G103	Classical control methods of electrical power systems	Electrical Engineering	5	DPSED	English
3I0G307	Sensorless control of electric drives	Electrical Engineering	5	DPSED	English
3I0G305	Power system control	Electrical Engineering	5	DPSED	English
3I0G310	Electric traction	Electrical Engineering	5	DPSED	English
3I0G304	Power systems protection	Electrical Engineering	5	DPSED	English
3I0G308	Discrete control of power electronic systems	Electrical engineering	5	DME, DPSED	English

Summer Semester

Code	Course Title	Study programme	ECTS	Department	Language
3I0A207	Robotic systems	Process Control	6	DCIS	English
3I0A208	Web Applications Development	Process Control	5	DCIS	English
3I0D205	Compatibility of Biological and Technical Systems	Biomedical Engineering	6	DEBE	English
3I0D202	Biomedical Image Processing	Biomedical Engineering	6	DEBE	English
3I0D204	Artificial Intelligence in Biomedicine	Biomedical Engineering	6	DEBE	English
3I0D203	Medical Electronics 2	Biomedical Engineering	6	DEBE	English
3I00207	Virtual instrumentation 2	Electrical engineering	5	DME	English
3I0G211	Analysis and synthesis of power semiconductor systems	Electrical engineering	5	DME	English
3I0G213	Electromagnetic compatibility	Electrical engineering	5	DME	English
3I0H206	Game design	Multimedia Engineering	6	DMICT	English
3I00203	Digital television and New Services	Multimedia Engineering	6	DMICT	English
3I0H201	Distribution of Multimedia Signals	Multimedia Engineering	6	DMICT	English
3I0J203	Radiocommunication systems and networks 1	Telecommunication and Radiocommunication Engineering	5	DMICT	English
3I0J202	High frequency technique	Telecommunication and Radiocommunication Engineering	5	DMICT	English
3I00204	Digital audio processing	Telecommunication and Radiocommunication Engineering Multimedia Engineering	6	DMICT	English
3I0C202	Applied optics and lighting technique	All study programmes	6	DPh	English
3I00205	Optical sensors	All study programmes	5	DPh	English
3I0C201	Waveguide optics	All study programmes	5	DPh	English
3I00206	Integrated optics and optoelectronics	All study programmes	5	DPh	English
3I0G208	Modern electrical machines	Electrical Engineering	5	DPSED	English
3I0G207	Modern control methods of electrical power systems	Electrical Engineering	5	DPSED	English