

STUDY PROGRAMME: Applied Mechanics and Mechatronics
Study branch: 3901 Applied Mechanics, 2387 Mechatronics

Degree of study: Ing. (MSc)
 Form of study: full-time
 Method of study: attendance method

Course No.	Course	1st year		2nd year		Mode of completion	Credits
		WS	SS	WS	SS		
Obligatory courses							
210514	Vibration of Mechanical Systems	2 – 200				c,e	6
210512	Applied Elasticity and Strength of Materials	2 – 200				c,e	6
210539	Graphic Programming	1 – 020				c,e	4
210511	Mechanics of Coupled Space Systems	3 – 010				c,e	5
210515	Experimental Methods in Mechanics	1 – 200				c,e	5
210553	Professional Practice	min. 5 weeks				c	2
210554	Excursion	1 week				c	1
210611	Finite Element Methods in Dynamics of Structures			3 – 020		c,e	7
210621	Semester Project			0 – 004		cc	6
210649	Diploma Work			0 – 0014		c,c	16
2000001	State Examination					e	4

Compulsory elective courses					
260503	PV 1: Computer Fluid Dynamics	3 – 200		c,e	6
220511	PV 1: Theory of Automatic Control I	3 – 020		c,e	6
241552	PV 1: Transport Phenomena	3 – 200		c,e	6
270505	PV 1: Production Engineering	3 – 200		c,e	6
250505	PV 1: Design Materials	3 – 200		c,e	6
282502	PV 1: Vector Analysis	3 – 020		c,e	6
230501	PV 1: Computer Design	3 – 020		c,e	6
260505	PV 2: Nuclear Power Plants	2 – 200		c,e	6
220668	PV 2: Metrology and Testing	2 – 200		c,e	6
241554	PV 2: Applied Physical Chemistry	2 – 200		c,e	6
270514	PV 2: Programming of CNC Systems	2 – 200		c,e	6
230503	PV 2: Mechanic and Hydraulic Transmissions	2 – 020		c,e	6
250311	PV 2: Powder Metallurgy	2 – 200		c,e	6
282506	PV 2: Statistical Analyses	2 – 200		c,e	6
210507	PV 1 ^A /Analytical Mechanics	2 – 200		c,e	5
210516	PV 1 ^A /Dynamics of Machines	2 – 110		c,e	5
220512	PV 1: ^B /Theory of Automatic Control II	2 – 020		c,e	5
210646	PV 1: ^B /Modelling of Robot Mechanisms	2 – 020		c,e	5
210556	PV 2: ^{A/B} /Monitoring Systems in Applied Mechanics	2 – 010		c,e	5
210513	PV 2: ^A /Continuum Mechanics	2 – 100		c,e	5
210529	PV 2: ^A /Noise Reduction in Industry	2 – 100		c,e	5
220627	PV 2: ^B /Microprocessors and Microcomputers	2 – 020		c,e	5
220518	PV 2: ^B /Electromechanical systems	2 – 020		c,e	5
210543	PV 2: ^B /Experimental Identification of Mechatronic Systems	2 – 020		c,e	5
220516	PV 2: ^B /Database Systems and Internet	2 – 020		c,e	5
220519	PV 2: ^B /Theory of Modelling, Experiment and Signal Processing	2 – 020		c,e	5
210620	PV 1 ^A /Fatigue of Machine Parts		2 – 200	c,e	6
210618	PV 1 ^A /Random Oscillation		2 – 100	c,e	6
220519	PV 1 ^B /Theory of Design of Robotic Systems		2 – 020	c,e	6
220622	PV 1 ^B /Communication and Control Systems in Mechatronic		2 – 010	c,e	6
210525	PV 2: ^{A/B} /Computer Simulation of Mechanisms		2 – 010	c,e	5
210627	PV 2: ^A /Calculation Methods in Mechanics		2 – 100	c,e	5
210628	PV 2: ^A /Plasticity and Creep		2 – 010	c,e	5

210632	PV 2: ^A /Non-Linear Continuum Mechanics		2 – 010	c,e	5
220621	PV 2: ^B /Electric Drivers and Servo Drivers		1 – 020	c,e	5
220517	PV 2: ^B /Sensors and Measurement of Non-Electric Quantities		1 – 020	c,e	5
210542	PV 2: ^B /Active Vibroinsulation of Mechatronic Systems		1 – 110	c,e	5
210648	PV 2: ^B /Control of Continuum Mechatronic Systems		1 – 020	c,e	5
210648	PV 2: ^{A/B} /Reability and Fault Detection		1 – 110	c,e	5
210633	PV 2: ^{A/B} /Mechanics of Unconventional Materials		3 – 110	c,e	5
210634	PV : ^A /Fracture Mechancis		2 – 200	c,e	5
210522	PV : ^A /FEM in Continuum Mechanics	2 – 100	3 – 200	c,e	5
210623	PV : ^A /Biomechanics		3 – 110	c,e	5
210645	PV : ^B /Data Transfer in Mechatronics		3 – 020	c,e	5
210631	PV ^A /Vibroinsulation and Vibration Diagnostics		3 – 110	c,e	5
210613	PV : ^B /Biomechatronics		3 – 020	c,e	5
210647	PV : ^{A/B/T} /Technical Diagnostics		3 – 110	c,e	5

Elective courses					
283505	Ethics	2 – 000		cc	2
2835xx	Professional Communication in Foreign Language (En, Ge, Fr, Sp)	0 – 200		cc	1
284510	Physical Education	0 – 200		c	1
270554	Financial Aspects of Quality Management	2 – 000		cc	2
220589	Certification and Accreditation in Economics	2 – 000		cc	2
210551	Protection of Human Beings against Noise and Vibration	2 – 000		cc	2
282511	Algebraic Structures	2 – 000		c,e	3
282501	Systems of Differential Equations	3 – 200		c,e	6
283507	History of Philosophy	2 – 000		cc	2
2835xx	Professional Communication in Foreign Language (En, Ge, Fr, Sp)	0 – 200		cc	1
284510	Physical Education	0 – 200		c	1
283506	Legislative in Engineering	2 – 000		cc	2
280656	Total Quality Management	2 – 000		cc	3
220546	History of Measurement	2 – 000		cc	2
220547	Processing of Graphic and Text Data	2 – 000		cc	2
282411	Algebraic structures	2 – 000		cc	3
210555	Sport Biomechanics	2 – 000		cc	2
2836xx	Professional Communication in Foreign Language (En, Ge, Fr, Sp)		0 – 200	cc	1
284612	Physical Education		0 – 200	c	1
283610	History of Slovak Technology		2 – 000	cc	2
270555	Strategic Management		2 – 000	cc	2
260625	Development of Transport Technology and Power Technology		2 – 000	cc	2
210652	Strategy of Reduction of Noise and Vibration		2 – 000	cc	2
2836xx	Professional Communication in Foreign Language (En, Ge, Fr, Sp)		0 – 200	cc	1
284613	Physical Education		0 – 200	c	1

Comments:

Compulsory elective courses student writes as follow:

1st semester - 1 course PV 1 and 1 course PV 2

2nd semester - 1 block of courses (A,B), 1 subject PV 2^{A/} or PV 2^{B/}

3rd semester - 1 block of courses (A,B), 1 subject PV 2^{A/} or PV 2^{B/}

4th semester - 2 courses PV ^{A/} or PV ^{B/}

Numbering of courses Foreign Language (2835xx):

1st semester: En – 60, Ge – 61, Fr – 42, Sp – 63

2nd semester: En – 75, Ge – 76, Fr – 77, Sp – 78

Numbering of courses Foreign Language (2832xx):

3rd semester: En – 80, Ge – 81, Fr – 82, Sp – 83

4th semester: En – 90, Ge – 91, Fr – 92, Sp – 93

WS - Winter semester

WS - Summer semester

cc - Classified credit

c - Credit

e - Exam

En - English Language
Fr - French Language
Ge - German Language
Sp - Spanish Language