

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

Degree of study: Bc (BSc)  
 Form of study: full-time  
 Method of study: attendance method

Course No.	Course	1st year		2nd year		3rd year		Mode of completion	Credits
		WS	SS	WS	SS	WS	SS		
<b>Obligatory Courses</b>									
282101	Mathematics I	4 – 400						c,e	10
230101	Fundamentals of Mechanical Engineering	3 – 200						c,e	7
241101	Engineering Chemistry	2 – 000						c,e	4
282104	Programming	1 – 020						cc	5
282102	Mathematics II		2 – 110					c,e	6
281120	Applied Physics I		2 – 020					c,e	6
250101	Material Science		2 – 020					c,e	6
210101	Engineering Mechanics I		2 – 200					c,e	6
281121	Applied Physics II			2 – 020				c,e	5
242202	Fluid Mechanics			3 – 200				c,e	6
250202	Production Processes I			2 – 020				c,e	6
210203	Elasticity and Strength			3 – 200				c,e	6
283232	Law for Engineers			1 – 000				c	1
230203	Machine Design I				2 – 200			c,e	5
260201	Thermodynamics				2 – 020			c,e	6
270305	Production Processes II				2 – 020			c,e	6
270301	Basics of Management				2 – 000			c,e	2
210297	Practice in Industry			(min.6 weeks)				c	2
210310	Fundamentals of Finite Elements Method					2 – 020		c,e	5
230307	Mechatronics					2 – 200		c,e	5
210306	Structure Strength Optimization					2 – 200		c,e	5
210309	Theory of Multibody Systems					2 – 200		c,e	5
270309	Integrated Management Systems					2 – 000		c,e	3
210308	Fundamentals of Machine Dynamics					3 – 200		c,e	6
210311	Simulation of Mechatronic Systems					3 – 200		c,e	6
210399	Bachelor Work					0 – 0014		c,e	18

<b>Compulsory elective courses</b>									
2831xx	PV 1: Professional Communication in Foreign Language (En, Ge, Fr, Sp)	0 – 200						cc	1
284191	PV 2: Physical Education	0 – 200						c	1
284192	PV 2: Health-Convalence Physical Education	1 – 100						c	1

282203	PV 1: Numerical Mathematics		3 – 200		c,e	6
210202	PV 1: Engineering Mechanics II		3 – 200		c,e	6
2832xx	PV 2: Professional Communication in Foreign Language (En, Ge, Fr, Sp)		0 – 200		cc	1
284193	PV 3: Physical Education		0 – 200		c	1
284194	PV 3: Health-Convalescence Physical Education		1 – 100		c	1
2832xx	PV 2: Professional Communication in Foreign Language (En, Ge, Fr, Sp)		0 – 200		cc	1
284295	PV 2: Physical Education		0 – 200		c	1
284196	PV 2: Health-Convalescence Physical Education		1 – 100		c	1
282205	PV 3: Conconstructive Geometry		2 – 200		c,e	5
282206	PV 3: Basics of Statistic Analysis		2 – 200		c,e	5
220302	PV 1: Automation and Measurement			2 – 020	c,e	5
270304	PV 1: Production Machines and Systems			2 – 200	c,e	5
241303	PV 1: Process Engineering			2 – 200	c,e	5
220201	PV 1: Electrics and Electronics			2 – 020	c,e	5
260202	PV 1: Heat Transfer			2 – 020	c,e	5
230304	PV 1: Machine Design II			2 – 020	c,e	5
2833xx	PV 2: Professional Communication in Foreign Language (En, Ge, Fr, Sp)			0 – 200	cc	2

Elective courses						
282109	Additional Exercises in Mathematics I	0 – 200			c	1
281127	Seminar in Physics I	0 – 200			c	1
230102	Computer Aided Design I	0 – 040			c	2
284190	Physical Education	0 – 200			c	1
2831xx	Professional Communication in Foreign Language (En, Ge, Fr, Sp)	0 – 200			c	1
283130	History of Technology	2 – 000			cc	2
282110	Additional Exercises in Mathematics II	0 – 200			c	1
281127	Seminar in Physics II	0 – 200			c	1
230103	Computer Aided Design II	0 – 040			c	2
283131	Social Science	2 – 000			cc	2
282111	Selected Chapters from Applied Mathematical Analysis		2 – 000		c	2
282307	Mathematics III		2 – 000		c	2
282212	Differential Equations		2 – 000		c	2
241201	Safety of Production Equipment		2 – 000		c	2
284397	Physical Education			0 – 200	c	1
282309	Linear Algebra			2 – 000	c	2
282310	Numerical Mathematics in Matlab			2 – 000	c	2
241312	Wasteless Technologies BAT			2 – 000	c	2
2833xx	Professional Communication in Foreign Language (En, Ge, Fr, Sp)			0 – 200	c	1
284399	Physical Education			0 – 200	c	1

Comments:

Compulsory elective courses student registers as follows:

2nd semester - 1 course PV 1, 1 language (PV 2)

3rd semester - 1 course PV 1, 1 language (PV 2), and 1 course PV 3

4th semester - 1 language (PV 1) and 1 course PV 2, and 1 course PV 3

5th semester - 1 course PV 1, and 1 language (PV 2)

Numbering of courses Foreign Language (2831xx):

1st semester: En – 40, Ge – 41, Fr – 42, Sp – 43

2nd semester: En – 45, Ge – 46, Fr – 47, Sp – 48

Numbering of courses Foreign Language (2832xx):

3rd semester: En – 50, Ge – 51, Fr – 52, Sp – 53

4th semester: En – 55, Ge – 56, Fr – 57, Sp – 58

Numbering of courses Foreign Language (2833xx):

5th semester: En – 60, Ge – 61, Fr – 62, Sp – 63

6th semester: En – 65, Ge – 66, Fr – 67, Sp – 68

WS - Winter semester

SS - Summer semester

cc - Classified credit

c - Credit

e - Exam

En - English Language

Fr - French Language

Ge - German Language  
Sp - Spanish Language