

Postgraduate Study Programme

Machines and Equipment Design

Year 1.

Subject [abbreviation]	Guarantee department	Semester		Number of credits
		Winter 14 weeks	Summer 14 weeks	
Obligatory subjects				
Robots and Manipulators (ROBM)	KSR	2+2 ex		5
Vibration of Mechanical Systems (KMS)	KMP	2+2 ex		5
Heat and Mass Transfer (PTH)	KEZ	2+2 ex		5
Mechanism Design (SM-N)	KTS	2+2 ex		5
Numerical Simulation in Machine Design	KTS	2+2 cc		4
Advanced CAD Technology (PTC)	KST	0+2 c		2
Fatigue of Structures and Materials	KMP		2+2 ex	5
Design Methodology (MKO)	KTS		2+2 ex	4
Machine Drives and Servomechanisms	KSA		2+2 ex	4
Project I	Dep.		0+4 cc	3
Internship	KTS		1 week	2
Field trip	KTS		3 weeks	2
Obligatory eligible subjects – group 1¹⁾				
Machines for the Production of Fibrous and Nanofibrous Structures	KTS	2+2 ex		4
Technology of Automatic Glass Production (TVS)	KSR			
Production Machines I (VS1)	KSA			
Experimental Methods in Fluid Mechanics and Thermodynamics	KEZ			
Obligatory eligible subjects – group 2¹⁾				
Textile Machines	KTS		4+2 ex	6
Glass Machines (SKLS)	KSR			
Production Machines II	KSA			
Construction of Heat Machines	KEZ			
Obligatory eligible subjects – group 3¹⁾				
Machines Design (SS)	KTS		3+2 ex	5
Design of Robots	KSR			
Hydraulic Elements and Circuits	KSA			
Applied Fluid Mechanics (AMT)	KEZ			
summary of credits		30	31	61
summary of ex and cc		5ex 1cc	5ex1cc	

Abbreviation:

2+2	number of lectures and exercises weekly
ex	examination
cc	classified credit
c	credit

Notes

¹⁾ Students choose one of the subjects according to the topic and the department of the Diploma Thesis. The list of obligatory eligible subjects is in the Tab I.

Postgraduate Study Programme

Machines and Equipment Design

Year 2.

Subject [abbreviation]	Guarantee department	Semester		Number of credits
		Winter 14 weeks	Summer 10 weeks	
<u>Obligatory subjects</u>				
Experimental Methods	KTS	2+2 cc		4
Engineering Materials	KMT	2+0 ex		3
Electro Pneumatic Actuators	KSR	2+2 ex		4
Project II (PR2)	dep.	0+4 cc		4
Diploma Thesis 1	dep.	0+2 c		2
Theory of Inventive Problem Solving	KST		2+2 ex	4
Technical Diagnostics (TD)	KVM		2+2 ex	4
Automatic Interoperative Manipulation	KSR		2+2 ex	4
Diploma Thesis 2	dep.		0+8 c	7
Diploma Thesis 3	dep.		0+16 c	15
<u>Obligatory eligible subjects – group 4¹⁾</u>				
Modelling of Mechanical Systems	KTS	2+2 ex		5
Robotic Effectors	KSR			
Additive Technology (ADIT)	KSA			
Technical Equipment of Buildings	KEZ			
<u>Obligatory eligible subjects – group 5¹⁾</u>				
Selected Chapters from Single-purpose Machines	KTS	2+2 ex		4
Robot vision	KSR			
3D Digitization and Reverse Engineering	KSA			
Piping Systems and their Regulation	KEZ			
summary of credits		25	35	60
summary of ex and cc		4ex 2cc	3 ex	

Abbreviation:

2+2	number of lectures and exercises weekly
ex	examination
cc	classified credit
c	credit

Notes

¹⁾ Students choose one of the subjects according to the topic and the department of the Diploma Thesis. The list of obligatory eligible subjects is in the Tab I.

Group	Department of Textile Machine Design (KTS)	Department of Glass Producing Machines and Robotics (KSR)
1	Machines for the Production of Fibrous and Nanofibrous Structures	Technology of Automatic Glass Production (TVS)
2	Textile Machines	Glass Machines (SKLS)
3	Machines Design (SS)	Design of Robots
4	Modelling of Mechanical Systems	Robotic Effectors
5	Selected Chapters from Single-purpose Machines	Robot vision
Group	Department of Manufacturing Systems and Automation (KSA)	Department of Power Engineering Equipment (KEZ)
1	Production Machines I (VS1)	Experimental Methods in Fluid Mechanics and Thermodynamics
2	Production Machines II	Construction of Heat Machines
3	Hydraulic Elements and Circuits	Applied Fluid Mechanics (AMT)
4	Additive Technology (ADIT)	Technical Equipment of Buildings
5	3D Digitization and Reverse Engineering	Piping Systems and their Regulation

Tab I