

MINISTRY OF EDUCATION AND SCIENCE OF THE REPUBLIC OF KAZAKHSTAN  
KAZAKH NATIONAL RESEARCH TECHNICAL UNIVERSITY after K. SATBAYEV



MAJOR ELECTIVE DISCIPLINES educational program for the 2022-2023 academic year admission  
Educational program 6B07220 - "Machines and technologies for processing new materials"  
Group of Educational programs B069 - "Production of materials (glass, paper, plastic, wood)"

Full-time study

Study duration : 4 years

Academic degree: Bachelor of Engineering and Technology

Year of study	Code of elective	Code of discipline	Name of discipline	Semestr	Cycle	Credits	Total hours	lec/lab/pr	STW (including SIWT) in
<b>General technical training module</b>									
3	3201	MSM149	Hydraulics and hydraulic pneumatic drive	5	BD CCH	5	150	1/0/2	105
		GEN119	Fluid and gas mechanics					1/1/1	
	3202	MSM163	Theory of materials processing by pressure	6	BD CCH	5	150	1/0/2	105
		MSM164	Physical foundations of plastic deformation						
	3203	MSM167 MSM168	Forging and stamping equipment	6	BD CCH	5	150	2/0/1	105
			Pressing equipment						
	3301	MCH159	Fundamentals of designing machines for pressure treatment	6	PD CCH	5	150	2/0/1	105
Welding equipment and tools									
3302	MSM415	Computer-aided design systems for pressure treatment of materials	6	PD CCH	4	120	1/2/0	75	
		Automation of material processing processes by pressure							
4	3204	MSM461	Design of forging and stamping equipment	7	BD CCH	5	150	2/1/0	105
		MSM462	Die tool design						
<b>Module of production and technological preparation</b>									
4	4303	MSM455	Organization and planning of forging and stamping production	7	PD CCH	6	180	2/0/2	120
		MSM421	Production design						
	4304	MSM453	Tool and mold design	7	PD CCH	6	180	2/0/2	120
			Advanced materials processing technologies						
	4305	MSM412	Composite materials processing technology	8	PD CCH	5	150	1/2/0	105
			Properties and processing of engineering materials						
	4306	MCH149	CAM(Solidworks, Inventor)	8	PD CCH	5	150	1/2/0	105
MSM119			Additive manufacturing					2/0/1	
<b>Management training module</b>									
4	4307	MNG481	Theory and practice of project management	8	PD CCH	5	150	2/0/1	105
		MSM418	Capstone Project					1/2/0	

Credits numbers of elective disciplines over the entire period of study	
Cycle of disciplines	Credits
Cycle of basic disciplines (B)	20
Cycle of special disciplines (S)	36
<b>Overall:</b>	<b>56</b>

Decision of the Academic Council of the Institute E&ME, Protocol № 5 от "20" 01 2022y.

ME,SC&M Department Head

*[Signature]*

M.Issametova

Representative of the Council for EP from Employers

*[Signature]*

I. Dyusebaev