

WORKING CURRICULUM of the educational program for recruitment for 2021-2022 academic year (winter semester)

Educational program: TM07183 - "Materials science and technology of new materials"

Group of educational programs M110 - "Materials science and technology of new materials"

Form of education: full time Duration of study: 2 years Academic degree: Master of Natural Sciences

year of study	Code	Name of the discipline	Cycle	Total amount in credits	Total hours	Auditory amount: Lectures Prc.	Practical amount: Lab. Work Prc.	Practical amount: PWk, h	Prerequisite	Code	Name of the discipline	Cycle	Total amount in credits	Total hours	Auditory amount: Lectures Prc.	Practical amount: Lab. Work Prc.	Practical amount: PWk, h	Prerequisite	
1 semester (autumn 2021-2022 a-1)																			
1	AAP244	Pedagogical practice	BD UC	4						LNA0210	Foreign language (professional)	BD UC	1	150	0/0%	105			
	HEIM210	History and philosophy of science	BD UC	6	120	140/1	90			HEIM208	Psychology of management	BD UC	3	90	100%	60			
	HEIM209	Higher education pedagogy	BD UC	4	120	140/1	90			PHV215	Physical-chemical methods for the study of materials	BD UC	5	150	240%	105			
	PHV711	Materials science and technologies of advanced materials	BD OC	5	150	240/1	105			PHV716	Materials for 3D technology	MD OC	1	150	240%	105			
	PHV712	Technological quality assurance of materials	BD OC	5	150	240/1	105			PHV717	Functional problems of materials science	MD OC	5	150	240%	105			
	PHV713	Computer modeling in materials science	MD OC	5	150	240/1	105												
	PHV714	New functional materials	MD OC	5	150	240/1	105												
	AAP242	Research work of a master student, including an internship and a master's dissertation	RWMS	6						AAP242	Research work of a master student, including an internship and a master's dissertation	RWMS	6						
	Total			38						Total				25					
2 semester (autumn 2021-2022 a-2)																			
2	PHV718	Mechanics for materials selection and technology	MD OC	5	150	240/1	105			AAP236	Research practice	MD OC	7						
	PHV719	Multiphase structures and methods for calculating phase diagrams	MD OC	5	150	240/1	105			HEA205	Writing and submission of a master dissertation	EA	12						
	PHV720	Destruction and reliability assessment of materials	MD OC	5	150	240/1	105												
	PHV721	The surface structure engineering	MD OC	5	150	240/1	105												
	PHV722	Advanced materials processing technologies	MD OC	5	150	240/1	105												
	AAP242	Research work of a master student, including an internship and a master's dissertation	RWMS	6						AAP242	Research work of a master student, including an internship and a master's dissertation	RWMS	6						
	Total			21						Total				21					

Decision of the Academic Council of KNTU named after K. Satbayev, Protocol № 7 from 20.09.2021.

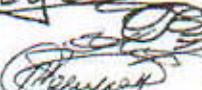
Decision of the Academic Council of the M&M Institute, Protocol № 5 from 20.12.2021.

Vice-rector for academic affairs



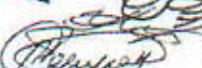
Zhezrikov R.A.

Director of the M&M Institute



Kyslyakov K.B.

Head of the MNTEP department



Chairman of the Specialty Council

Berlikhanov A.S.

The number of credits for the entire period of study		
Discipline cycles	Credits	
Cycle of basic disciplines (BD UC, BD OC)	75	
Cycle of major disciplines (MD UC, MD OC)	52	
Total theoretical training:	87	
RWMS	24	
Writing and submission of a doctoral dissertation	12	
OVERALL:	123	