

APPROVED

MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE RUSSIAN FEDERATION

MOSCOW AVIATION INSTITUTE (NATIONAL RESEARCH UNIVERSITY)

Vice Rector for Education
Kozorez D.A.

CURRICULUM

Year of Application 2021/22
Direction of Training: 24.04.05 Propulsion Engineering
Graduate 24.04.05.M50 Heat and Mass Transfer in Power Plants

Graduation Department 204
Degree: Master
Form of Attendance: Full Time
Program Duration 2 Years

Year	Weeks																																																				Contact hours	Exam. Session	Practice	State Final	Holidays	TOTAL				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52										
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32	8			8	48			
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34	6		6	6	52	
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					4	4
Designation:	Contact Hours		Examinations		Practice		Final Project		Holidays		Final State Certification		Contact hours and Distributed Practice		66	14		6	18	104																																										

Course Supporting Department	#	Item	Semesters					Total hours								Preparation for Exam
			Examination	Assessments	Course Projects	Cours Works	Number of Credits	Total	Contact Hours					S/W		
									Total	Lectures	Laboratory Tute	Tutorials	S/WA			
		Block 1. Disciplines						60	2 160	940	442	286	212		860	270
		Compulsory section						22	792	312	110	142	60		372	
ДП1	1	Russian Language		1,2,3				8	288	80	2	78			208	
517	2	Philosophy and Methodology of Science and Technology		1				2	72	36	20	16			36	
204	3	Theory of Thermophysical Properties of Materials	3					3	108	54	18	36			18	36
204	4	CFD Software Packages	4	3				5	180	86	38		48		58	36
201	5	Continuum Mechanics	2					4	144	56	32	12	12		52	36
		Section formed by the participants of educational relations						38	1 368	628	332	144	152		488	
505	6	Project Management		1				2	72	36	20	16			36	
208	7	Numerical Methods	1					3	108	36	20	16			36	36
204	8	Heat and mass transfer. Fundamentals of the Theory and Calculation of Heat Engineering Systems	3					3	108	54	18	36			18	36
204	9	Gas Turbine Engine Chamber Processes		3		3		3	108	54	24	22	8		54	
903	10	Structural Materials Technology	1					3	108	54	44	10			18	36
903	11	Structures Production Technology	2					3	108	42	34		8		30	36
101	12	Fundamentals of Aircraft Structure, part 1	2					3	108	42	30		12		30	36
601	13	Fundamentals of Aircraft Structure, part 2	2					3	108	56	36		20		16	36
602	14	Structural Strength		2				3	108	42	30		12		66	
		Elective Disciplines						12	432	212	76	44	92		184	27
204	15.1	Numerical Simulation of Thermal Physics Problems		4				4	144	64	20	24	20		80	
204	15.2	Numerical Solution of Heat and Mass Transfer Problems		4				4	144	64	20	24	20		80	
203	16.1	Computer Analysis and Simulation Tools	2					4	144	76	20		56		32	36
203	16.2	Computer Technology in Engineering Development	2					4	144	76	20		56		32	36
204	17.1	Special Chapters of Thermal Physics and Continuum Mechanics		3				4	144	72	36	20	16		72	
204	17.2	Convective-Radiative Heat Transfer in Turbulent Flows		3				4	144	72	36	20	16		72	
		Block 2. Practice						51	1 836						1 836	
		Compulsory section														
		Learning Practices														
		Production Practices														
		Section formed by the participants of educational relations						51	1 836						1 836	
		Learning Practices						42	1 512	420				420	1 092	
204		Educational and Introductory Practice		1				6	216	60				60	156	
204		Research Educational Practice		2				6	216	60				60	156	
204		Research Practices		3				6	216	60				60	156	
204		Educational and Introductory Work		1,2,3,4				24	864	240				240	624	
		Production Practices						9	324	90				90	234	
204		Undergraduate Practice		4				9	324	90				90	234	
		Block 3. Final State Certification						9	324	35				35	289	
		Final state certification		4				9	324	35				35	289	
		Preparation for Graduation Qualification Work, procedure of Graduation Qualification Work Defence		4				9	324	35				35	289	
		Total						120	4 320	1 485	442	286	212	545	2 475	

Chief of Division on
Education Methodological

Head of the School

Head of Department