



# AFYON KOCATEPE UNIVERSITY

## GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES

### DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING



## MASTER (MSc) PROGRAM

### FIRST YEAR

FIRST SEMESTER								
COURSE CODE	COURSE NAME	C/E	COURSE CREDIT*					
			TH	AP	TO	CR	EC	
MTM-5501	DIRECTED FIELD STUDIES	C	8	0	8	0	9	
MTM-5601	THESIS PREPARATION	C	0	1	1	0	1	
	ELECTIVE COURSE	E	3	0	3	3	5	
	ELECTIVE COURSE	E	3	0	3	3	5	
	ELECTIVE COURSE	E	3	0	3	3	5	
	ELECTIVE COURSE	E	3	0	3	3	5	
<b>TOTAL</b>			<b>20</b>	<b>1</b>	<b>21</b>	<b>12</b>	<b>30</b>	

SECOND SEMESTER								
COURSE CODE	COURSE NAME	C/E	COURSE CREDIT*					
			TH	AP	TO	CR	EC	
MTM-5502	DIRECTED FIELD STUDIES	C	8	0	8	0	9	
MTM-5602	THESIS PREPARATION	C	0	1	1	0	1	
MTM-5701	SEMINAR	C	0	2	2	0	5	
	ELECTIVE COURSE	E	3	0	3	3	5	
	ELECTIVE COURSE	E	3	0	3	3	5	
	ELECTIVE COURSE	E	3	0	3	3	5	
<b>TOTAL</b>			<b>17</b>	<b>3</b>	<b>20</b>	<b>9</b>	<b>30</b>	



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### SECOND YEAR

THIRD SEMESTER								
COURSE CODE	COURSE NAME	C/E	COURSE CREDIT*					
			TH	AP	TO	CR	EC	
MTM-5503	DIRECTED FIELD STUDIES	C	8	0	8	0	9	
MTM-5603	THESIS	C	0	1	1	0	21	
<b>TOTAL</b>			<b>8</b>	<b>1</b>	<b>9</b>	<b>0</b>	<b>30</b>	

FOURTH SEMESTER								
COURSE CODE	COURSE NAME	C/E	COURSE CREDIT*					
			TH	AP	TO	CR	EC	
MTM-5504	DIRECTED FIELD STUDIES	C	8	0	8	0	9	
MTM-5604	THESIS	C	0	1	1	0	21	
<b>TOTAL</b>			<b>8</b>	<b>1</b>	<b>9</b>	<b>0</b>	<b>30</b>	



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## GRADUATE PROGRAMS

### ELECTIVE COURSES

COURSE CODE	COURSE NAME	C/E	COURSE CREDIT*				
			TH	AP	TO	CR	EC
FBE-5001	SCIENTIFIC RESEARCH AND METHODS	E	3	0	3	3	5
MTM-5001	ENGINEERING MATHEMATICS	E	3	0	3	3	5
MTM-5002	PHASE TRANSFORMATIONS	E	3	0	3	3	5
MTM-5003	CAST IRON TECNOLOGY	E	3	0	3	3	5
MTM-5004	MICROSCOPIC AND MICROSTRUCTURAL CHARACTERIZATION OF METERIALS	E	3	0	3	3	5
MTM-5005	POROUS MATERIALS	E	3	0	3	3	5
MTM-5006	HIGH TEMPERATURE MATERIALS	E	3	0	3	3	5
MTM-5007	WELDING OF LIGHT INDUSTRIAL METALS AND ALLOYS	E	3	0	3	3	5
MTM-5008	COATING TECHNIQUES	E	3	0	3	3	5
MTM-5009	PHSICAL METALLURGY OF WELDING	E	3	0	3	3	5
MTM-5010	SURFACE HARDENING TECHNIQUES	E	3	0	3	3	5
MTM-5011	HEAT TREATMEN THEORIES AND TECHNOLOGY OF METALS	E	3	0	3	3	5
MTM-5012	MECHANICAL BEHAVIOR OF METALLIC MATERIALS	E	3	0	3	3	5
MTM-5013	CORROSION MECHANISMS AND FAILURES IN METALS	E	3	0	3	3	5
MTM-5014	TRIBOLOGY OF METERIALS	E	3	0	3	3	5
MTM-5015	INTRODUCTION TO FRACTURE MECHANICS	E	3	0	3	3	5
MTM-5016	WELD DEFECTS AND INSPECTION	E	3	0	3	3	5
MTM-5017	METAL-CERAMIC COMPOSITES	E	3	0	3	3	5
MTM-5018	THERMAL SPRAY COATING TECHNOLOGIES	E	3	0	3	3	5
MTM-5019	PLASMA ASSRSTED SURFACE TREATMENTS	E	3	0	3	3	5
MTM-5020	X-RAY DIFRACTIONS	E	3	0	3	3	5
MTM-5021	THERMOCHEMICAL COATINGS	E	3	0	3	3	5
MTM-5022	ENGINEERING CERAMICS	E	3	0	3	3	5
MTM-5023	THERMAL ANALYSIS METHODS IN METALURGY	E	3	0	3	3	5
MTM-5024	PRODUCTION OF POLYMER MATRIX COMPOSITE	E	3	0	3	3	5
MTM-6001	HEAT TREATMENTS OF NONFERROUS ALLOYS	E	3	0	3	3	5
MTM-6002	CASTING AND SOLIDIFICATION STRUCTURE	E	3	0	3	3	5
MTM-6003	NANOCOMPOSITE THIN FILMS COATINGS	E	3	0	3	3	5



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COURSE CODE	COURSE NAME	C/E	COURSE CREDIT*				
			TH	AP	TO	CR	EC
MTM-6004	MECHANICAL AND TRIBOLOGICAL PROPERTIES OF COATINGS	E	3	0	3	3	5
MTM-6005	WEAR AND FRICTION PROPERTIES OF HARD COATINGS	E	3	0	3	3	5
MTM-6006	JOINT TECHNICS WITHOUT ARC	E	3	0	3	3	5
MTM-6007	SPECIAL TOPICS IN THE MATERIALS ENGINEERING AND TECHNOLOGIES AND RELATED CHARACTERIZATION TECHNICS	E	3	0	3	3	5
MTM-6008	INTERMETALLIC ALLOYS AND THEIR PROPERTIES	E	3	0	3	3	5
MTM-6009	MANUFACTURING AND JOINING OF AVIATIC AND DEFENCE ALLOYS AND COMPOSITES	E	3	0	3	3	5
MTM-6010	WEAR MECHANISM OF MATERIALS AND EVALUATION METHODS	E	3	0	3	3	5
MTM-6011	MECHANICAL PROPERTIES OF POLIMERIC MATERIALS	E	3	0	3	3	5
MTM-6012	ADVANCED THIN FILM AND COATING TECHNOLOGIES	E	3	0	3	3	5
MTM-6013	PRINCIPLES AND METHODS OF METALLOGRAPHY	E	3	0	3	3	5
MTM-6014	MODERN PHYSICAL METALLURGY	E	3	0	3	3	5
MTM-6015	HEAT TREATMENT OF WELDED STRUCTURES	E	3	0	3	3	5
MTM-6016	THEORY OF DISLOCATION	E	3	0	3	3	5
MTM-6017	APPLIED FRACTURE MECHANISM	E	3	0	3	3	5
MTM-6018	CATHODIC PROTECTION	E	3	0	3	3	5
MTM-6019	HIGH TEMPERATURE CORROSION	E	3	0	3	3	5
MTM-6020	PROCESS-STRUCTURE-PROPERTY RELATIONS IN THE METALLIC MATERIALS	E	3	0	3	3	5
MTM-6021	PROCESS-STRUCTURE-PROPERTY RELATIONS IN THE NONMETALLIC MATERIALS	E	3	0	3	3	5
EGT-6001	DEVELOPMENT AND LEARNING	E	3	0	3	3	5
EGT-6002	INSTRUCTIONAL PLANNING AND EVALUATION	E	3	0	3	3	5