



AFYON KOCATEPE UNIVERSITY
GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES
DEPARTMENT OF MINING ENGINEERING



MASTER (MSc) PROGRAM

FIRST YEAR

FIRST SEMESTER								
COURSE CODE	COURSE NAME	C/E	COURSE CREDIT*					
			TH	AP	TO	CR	EC	
MAD-5501	DIRECTED FIELD STUDIES	C	8	0	8	0	9	
MAD-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	
TOTAL			20	1	21	12	30	

SECOND SEMESTER								
COURSE CODE	COURSE NAME	C/E	COURSE CREDIT*					
			TH	AP	TO	CR	EC	
MAD-5502	DIRECTED FIELD STUDIES	C	8	0	8	0	9	
MAD-5602	THESIS PREPARATION	C	0	1	1	0	1	
MAD-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	
TOTAL			17	3	20	9	30	



AFYON KOCATEPE UNIVERSITY
GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES
DEPARTMENT OF MINING ENGINEERING



MASTER (MSc) PROGRAM

SECOND YEAR

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

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



AFYON KOCATEPE UNIVERSITY
GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES
DEPARTMENT OF MINING ENGINEERING



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
MAD-5001	GEOLOGY OF MARBLE DEPOSITS OF TURKEY	E	3	0	3	3	5
MAD-5002	SOLID/LIQUID SEPARATION METHODS	E	3	0	3	3	5
MAD-5003	CHEMISTRY OF FLOTATION	E	3	0	3	3	5
MAD-5004	PLANNING AND COST CALCULATION	E	2	2	4	3	5
MAD-5005	ANALYSIS METHODS AND LABORATORY PRACTICES	E	2	2	4	3	5
MAD-5006	FIZIBILITY STUDIES IN MARBLE FACTORIES	E	2	2	4	3	5
MAD-5007	OPEN PIT MACHINES	E	3	0	3	3	5
MAD-5008	STABILITY OF CLAY-WATER COLLOIDAL SYSTEMS	E	3	0	3	3	5
MAD-5009	ADVANCED EXCAVATION MECHANICS	E	3	1	4	3	5
MAD-5010	INTRODUCTION AND PRODUCTION METHODS OF NATURAL STONES	E	3	0	3	3	5
MAD-5011	METAMORPHIC ROCKS PETROGRAPHY	E	3	0	3	3	5
MAD-5012	STORING AND UTILIZATION OF MINERAL PROCESSING PLANT WASTES	E	3	0	3	3	5
MAD-5013	DEPOSITS OF INDUSTRIAL MINERAL AND ROCK AND EVALUATION	E	3	0	3	3	5
MAD-5014	INVESTIGATION OF THE SURFACE PROPERTIES OF MINERALS	E	3	1	4	3	5
MAD-5015	QUARRY DESIGN IN SURFACE MINING	E	3	0	3	3	5
MAD-5016	ADVANCED ROCK MECHANICS	E	3	0	3	3	5
MAD-5017	INSTRUMENTAL ANALYSIS TECHNIQUES	E	2	2	4	3	5
MAD-5018	QUALITY CONTROL	E	3	0	3	3	5
MAD-5019	MINING PLANNING	E	3	0	3	3	5
MAD-5020	INDUSTRIAL RAW MATERIALS AND BENEFICIATION METHODS	E	3	0	3	3	5
MAD-5021	ADVANCED MARBLE CUTTING AND PROCESSING TECHNOLOGIES	E	3	0	3	3	5
MAD-5022	WIRE CUTTING MECHANIZATION IN MARBLE QUARRIES	E	3	0	3	3	5
MAD-5023	INVESTIGATION OF INDUSTRIAL MINERAL AND ROCKS USING MINERALOGICAL ANALYSIS METHODS	E	3	0	3	3	5
MAD-5024	PROCESSING METHODS OF BUILDING NATURAL STONES	E	3	0	3	3	5
MAD-5025	NANO-TECHONOLOGY APPLICATIONS IN MINERAL PROCESSING	E	3	0	3	3	5
MAD-5026	TREATMENT METHODS FOR THE METALLIC ORES	E	3	0	3	3	5
MAD-5027	CHEMICAL MINING	E	3	0	3	3	5
MAD-5028	PRENCIPLES AND APLICATIONS OF INDUSTRIAL CLASSIFICATION	E	3	0	3	3	5



AFYON KOCATEPE UNIVERSITY
GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES
DEPARTMENT OF MINING ENGINEERING



GRADUATE PROGRAMS

ELECTIVE COURSES

COURSE CODE	COURSE NAME	C/E	COURSE CREDIT*				
			TH	AP	TO	CR	EC
MAD-5029	NOVEL TECHNOLOGIES IN MINERAL PROCESSING	E	3	0	3	3	5
MAD-5030	ENRICHMENT METHODS FOR THE GOLD ORES	E	3	0	3	3	5
MAD-5031	ENVIRONMENTAL PROBLEMS INDUCED BY BLASTING AND CONTROLLED BLASTING	E	3	0	3	3	5
MAD-5032	COMPUTER APPLICATIONS IN MINING	E	3	0	3	3	5
MAD-5033	MECHANIZATION IN UNDERGROUND MINE OPERATIONS AND ITS EVOLUTION	E	3	0	3	3	5
MAD-5034	OCCUPATIONAL HEALTH AND SAFETY IN UNDERGROUND MINING FACILITIES	E	3	0	3	3	5
MAD-5035	OHS APPLICATIONS AND RISK ANALYSIS IN MINING'S (UNDERGROUND AND OPEN PIT MINING	E	3	0	3	3	5
MAD-5036	MINING MACHINES RELIABILITY AND MAINTANCE PLANING	E	3	0	3	3	5
MAD-5037	CLASSIFIATION AND EVALUATION OF MINERAL RESOURCES	E	3	0	3	3	5
MAD-5038	MAGMATIC ROCKS PETROGRAPHY	E	3	0	3	3	5
MAD-5039	MODELING AND SIMULATION OF MINERAL PROCESSING	E	2	2	4	3	5
MAD-5040	CARBONATE ROCKS PETROGRAPHY	E	2	2	4	3	5
MAD-5041	ADVANCED X-RAY DIFFRACTION	E	3	0	3	3	5
MAD-5042	PROPERTIES AND USES AREAS OF CLAY MINERALS	E	3	0	3	3	5
MAD-5043	WEATHERING IN MARBLES AND NATURAL STONES	E	3	0	3	3	5
MAD-5044	STRUCTURAL ANALYSIS	E	3	0	3	3	5
MAD-5045	ACTIVE TECTONICS	E	3	0	3	3	5
MAD-5046	MINE MACHINERY AND EQUIPMENT SELECTION	E	3	0	3	3	5
MAD-5047	WATER PROBLEMS IN MINING	E	3	0	3	3	5
MAD-5048	FINANCIAL ANALYSIS IN NATURAL STONE SECTOR	E	3	0	3	3	5
MAD-5049	ARTIFICIAL INTELLIGENCE APPLICATIONS IN ENGINEERING	E	3	0	3	3	5
MAD-5050	MARBLE CUTTING AND PROCESSING WITH WATERJET	E	3	0	3	3	5
MAD-5051	ADVANCED COMPUTER APPLICATION IN MINING	E	3	0	3	3	5
MAD-5052	MODERN/ADVANCED TUNNEL SHAFT CONSTRUCTION METHODS	E	3	0	3	3	5
MAD-6001	DESIGN AND PRODUCTIVITY IN UNDERGROUND COAL MINING	E	3	0	3	3	5
MAD-6002	ADVANCED FLOTATION TECHNIQUES	E	3	0	3	3	5
MAD-6003	SLOPE STABILITY AND ANALYSIS IN OPEN PIT OPERATION	E	3	0	3	3	5
MAD-6004	GRINDABILITY CHARACTERISTICS OF SOLID MATERIALS AND KINETICS OF COMMINATION	E	3	0	3	3	5
MAD-6005	ROCK FRAGMENTATION BY EXPLOSIVES AND APPLICATIONS IN MINING	E	3	0	3	3	5



AFYON KOCATEPE UNIVERSITY
GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES
DEPARTMENT OF MINING ENGINEERING



GRADUATE PROGRAMS

ELECTIVE COURSES

COURSE CODE	COURSE NAME	C/E	COURSE CREDIT*				
			TH	AP	TO	CR	EC
MAD-6006	ENGINEERING DATA ANALYSIS	E	3	0	3	3	5
MAD-6007	MINE FIRES, GAZ OUTBURSTS AND EXPLOSIONS	E	3	0	3	3	5
MAD-6008	NUMERICAL METHODS APPLICATIONS IN MINING AND TUNNELING	E	3	0	3	3	5
MAD-6009	HYDROMETALLURGCAL PROCESSES AND APLICATIONS	E	3	0	3	3	5
MAD-6010	ADVANCED AGGLOMERATION TECHNIQUES	E	3	0	3	3	5
MAD-6011	WASTE DAM DESIGN	E	3	0	3	3	5
MAD-6012	COMPUTER APPLICATIONS IN ROCK MECHANICS	E	3	0	3	3	5
MAD-6013	DETAILED TENOR AND RESERVE ACCOUNTS	E	3	0	3	3	5
MAD-6014	GEOSTATISTICS IN MINING	E	3	0	3	3	5
MAD-6015	ROCK MASS CLASSIFICATION SYSTEMS AND FORTIFICATIONS DESIGN	E	3	0	3	3	5
MAD-6016	ADVANCED FLOCCULATION TECHNIQUES	E	3	0	3	3	5
MAD-6017	THE ANALYSIS OF MINE VENTILATION AND GRIDS	E	3	0	3	3	5
MAD-6018	THE MODERN METHODS OF OPENING TUNNEL AND SHAFT	E	3	0	3	3	5
MAD-6019	ENVIRONMENTAL IMPACT ASSESSMENT IN MINING-	E	3	0	3	3	5
MAD-6020	ADVANCED DRILLING TECHNIQUES	E	3	0	3	3	5
MAD-6021	MARBLE AND NATURAL STONE PRODUCTION TECHNOLOGY	E	3	0	3	3	5
MAD-6022	MARBLE AND NATURAL STONE PRODUCT CERTIFICATION	E	3	0	3	3	5
MAD-6023	MARBLE AND NATURAL STONE PRODUCTION QUALITY CONTROL	E	3	0	3	3	5
MAD-6024	STRUCTURAL GEOLOGY IN MARBLE AND NATURAL STONE PRODUCTION	E	3	0	3	3	5
MAD-6025	SURFACE PROCESSING TECHNIQUES IN MARBLE AND NATURAL STONES	E	3	0	3	3	5
MAD-6026	COMPUTER CONTROLLED MARBLE MACHINES	E	3	0	3	3	5
MAD-6027	FEASIBILITY STUDIES IN MINING	E	2	2	4	3	5
MAD-6028	ROCK/MINERALS OF LIGHTWEIGHT CONCRETE AND STRUCTURAL ELEMENTS	E	3	0	3	3	5
MAD-6029	NEW DEVELOPMENTS IN GRAVITY RICH	E	3	0	3	3	5
MAD-6030	WORLD NATURAL STONE MARKET, PROJECTIONS AND STRATEGIES	E	3	0	3	3	5
MAD-6031	BOR TECHNOLOGY AND USE	E	3	0	3	3	5
MAD-6032	SURFACE PROPERTIES OF MINERALS	E	3	0	3	3	5
MAD-6033	LATEST TECHNOLOGIES AND APPLICATIONS IN SIZE REDUCTION	E	3	0	3	3	5
MAD-6034	FUZZY LOGIC APPLICATIONS IN MINING	E	3	0	3	3	5



AFYON KOCATEPE UNIVERSITY
GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES
DEPARTMENT OF MINING ENGINEERING



GRADUATE PROGRAMS

ELECTIVE COURSES

COURSE CODE	COURSE NAME	C/E	COURSE CREDIT*				
			TH	AP	TO	CR	EC
MAD-6035	OPTIMIZATION APPLICATIONS IN MINING	E	3	0	3	3	5
MAD-6036	OHS APPLICATIONS AND RISK ANALYSIS IN MARBLE QUARRIES AND FACTORIES	E	3	0	3	3	5
MAD-6037	STATISTICAL QUALITY CONTROL IN NATURAL STONE FACTORY	E	3	0	3	3	5
MAD-6038	DISCONTINUITY ANALYSIS IN ROCK MECHANICS	E	3	0	3	3	5
MAD-6039	ADVANCED RISK ASSESSMENT METHODS	E	3	0	3	3	5
MAD-6040	OCCUPATIONAL HEALTH AND SAFETY LEGISLATION	E	3	0	3	3	5
MAD-6041	CONTROL OF GAS, DUST AND NOISE IN UNDERGROUND MINING	E	3	0	3	3	5
MAD-6042	DESIGN OF UNDERGROUND MINE STRUCTURES	E	3	0	3	3	5
MAD-6043	MINING EFFICENCY ANALYSIS	E	3	0	3	3	5
MAD-6044	SPACE AND DEEP SEA/OCEAN MINING	E	3	0	3	3	5
MAD-6045	AUGMENTED-VIRTUAL REALITY IN MINING	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