



**AFYON KOCATEPE UNIVERSITY**  
**GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES**  
**DEPARTMENT OF PHYSICS**



**MASTER (MSc) PROGRAM**

**FIRST YEAR**

FIRST SEMESTER								
COURSE CODE	COURSE NAME	C/E	COURSE CREDIT*					
			TH	AP	TO	CR	EC	
FIZ-5501	DIRECTED FIELD STUDIES	C	8	0	8	0	9	
FIZ-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	
FIZ-5502	DIRECTED FIELD STUDIES	C	8	0	8	0	9	
FIZ-5602	THESIS PREPARATION	C	0	1	1	0	1	
FIZ-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	
FIZ-5503	DIRECTED FIELD STUDIES	C	8	0	8	0	9	
FIZ-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	
FIZ-5504	DIRECTED FIELD STUDIES	C	8	0	8	0	9	
FIZ-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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**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
FIZ-5001	ADVANCED QUANTUM MECHANICS I	E	3	0	3	3	5
FIZ-5002	ADVANCED QUANTUM MECHANICS II	E	3	0	3	3	5
FIZ-5003	ADVANCED ATOMIC AND MOLECULAR PHYSICS I	E	3	0	3	3	5
FIZ-5004	ADVANCED ATOMIC AND MOLECULAR PHYSICS II	E	3	0	3	3	5
FIZ-5005	ADVANCED NUCLEAR PHYSICS I	E	3	0	3	3	5
FIZ-5006	ADVANCED NUCLEAR PHYSICS II	E	3	0	3	3	5
FIZ-5007	ADVANCED SOLID STATE PHYSICS I	E	3	0	3	3	5
FIZ-5008	ADVANCED SOLID STATE PHYSICS II	E	3	0	3	3	5
FIZ-5009	ADVANCED ELECTROMAGNETIC THEORY I	E	3	0	3	3	5
FIZ-5010	ADVANCED ELECTROMAGNETIC THEORY II	E	3	0	3	3	5
FIZ-5011	SPECTROSCOPY METHODS I	E	3	0	3	3	5
FIZ-5012	SPECTROSCOPY METHODS II	E	3	0	3	3	5
FIZ-5013	ADVANCED APPLIED PHYSICS I	E	3	0	3	3	5
FIZ-5014	ADVANCED APPLIED PHYSICS II	E	3	0	3	3	5
FIZ-5015	MATHEMATICAL METHODS OF PHYSICS	E	3	0	3	3	5
FIZ-5016	THERMODYNAMICS AND STATISTICAL PHYSICS	E	3	0	3	3	5
FIZ-5017	ADVANCED CLASSICAL MECHANICS	E	3	0	3	3	5
FIZ-5018	RADIATION PHYSICS	E	3	0	3	3	5
FIZ-5019	RADITAIION MEASUREMENT TECHNIQUES	E	3	0	3	3	5
FIZ-5020	COMPUTER APPLICATIONS IN PHYSICS	E	3	0	3	3	5
FIZ-5021	PLASMA PHYSICS AND APPLICATIONS	E	3	0	3	3	5
FIZ-5022	LASER AND APPLICATIONS	E	3	0	3	3	5
FIZ-5023	TEACHING METHODS IN PHYSICS	E	3	0	3	3	5
FIZ-5024	ULTRASONIC AND APPLICATIONS	E	3	0	3	3	5
FIZ-5025	SPECIAL TOPICS IN PHYSICS	E	3	0	3	3	5
FIZ-5026	VACUUM TECHNOLOGY	E	3	0	3	3	5
FIZ-5027	ELECTRODYNAMICS	E	3	0	3	3	5
FIZ-5028	APPLIED OPTICS AND OPTICAL MEASUREMENTS	E	3	0	3	3	5



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COURSE CODE	COURSE NAME	C/E	COURSE CREDIT*				
			TH	AP	TO	CR	EC
FIZ-5029	PARTICLE ACCELERATORS	E	3	0	3	3	5
FIZ-5030	METROLOGY AND APPLICATIONS	E	3	0	3	3	5
FIZ-5031	COLLISION PHYSICS	E	3	0	3	3	5
FIZ-6001	QUANTUM OPTICS	E	3	0	3	3	5
FIZ-6002	STRUCTURE OF BIOLOGICAL MOLECULES	E	3	0	3	3	5
FIZ-6003	MOLECULAR STRUCTURE ANALYSIS	E	3	0	3	3	5
FIZ-6004	CHARGED PARTICLE OPTICS	E	3	0	3	3	5
FIZ-6005	CHARGED PARTICLE ANALAYSERS	E	3	0	3	3	5
FIZ-6006	MASS SPECTROMETER	E	3	0	3	3	5
FIZ-6007	COMPUTATIONAL METHODS AND APPLICATIONS IN PHYSICS I	E	3	0	3	3	5
FIZ-6008	COMPUTATIONAL METHODS AND APPLICATIONS IN PHYSICS II	E	3	0	3	3	5
FIZ-6009	NUCLEAR MODELS	E	3	0	3	3	5
FIZ-6010	MEASUREMENT TECHNIQUES IN NUCLEAR PHYSICS	E	3	0	3	3	5
FIZ-6011	HIGH ENERGY AND PARTICLE PHYSICS	E	3	0	3	3	5
FIZ-6012	REACTOR PHYSICS	E	3	0	3	3	5
FIZ-6013	CROSS SECTION MEASUREMENTS IN SCATTERING EXPERIMENTS	E	3	0	3	3	5
FIZ-6014	CURRENT TOPICS IN ATOMIC AND MOLECULAR PHYSICS	E	3	0	3	3	5
FIZ-6015	CURRENT TOPICS IN NUCLEAR PHYSICS	E	3	0	3	3	5
FIZ-6016	CURRENT TOPICS IN SOLID STATE PHYSICS	E	3	0	3	3	5
FIZ-6017	CURRENT TOPICS IN HIGH ENERGY PHYSICS	E	3	0	3	3	5
FIZ-6018	MODELS AND MODELLING IN PHYSICS EDUCATION	E	3	0	3	3	5
FIZ-6019	SIGNAL PROCESSING TECHNIQUES	E	3	0	3	3	5
FIZ-6020	MATERIAL STRUCTURE AND CRYSTALLOGRAPHY	E	3	0	3	3	5
FIZ-6021	ADVANCED MATERIAL CHARACTERIZATION TECHNIQUES	E	3	0	3	3	5
FIZ-6022	STRUCTURE OF QUANTUM PARTICLES	E	3	0	3	3	5
FIZ-6023	GROUP THEORY AND APPLICATIONS IN PHYSICS	E	3	0	3	3	5
FIZ-6024	SPECTROSCOPIC TECHNIQUES IN NANOPHYSICS	E	3	0	3	3	5
FIZ-6025	SPECTROSCOPIC TECHNIQUES IN CANCER THERAPY	E	3	0	3	3	5
FIZ-6026	ELECTRON SPECTROMETER	E	3	0	3	3	5



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COURSE CODE	COURSE NAME	C/E	COURSE CREDIT*				
			TH	AP	TO	CR	EC
FIZ-6027	EXPERIMENTAL INSTRUMENTATION DEVELOPMENT IN ACCELERATORS	E	3	0	3	3	5
EGT-6001	GELİŞİM VE ÖĞRENME	E	3	0	3	3	5
EGT-6002	ÖĞRETİMDE PLANLAMA VE DEĞERLENDİRME	E	3	0	3	3	5