



ULUDAĞ UNIVERSITY
GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES
2015-2016 ACADEMIC YEAR COURSE PLAN

DEPARTMENT OF DEPARTMENT OF CHEMISTRY
DEPARTMENT / PROGRAM MASTER'S DEGREE PROGRAM

COURSE STAGE	I. TERM / FALL								II. TERM / SPRING							
	Code	Course Title	Type	T	U	L	Credit	ECTS	Code	Course Title	Type	T	U	L	Credit	ECTS
	CHEM5181	ADVANCED TOPICS IN MA THESIS	Z	4	0	0	0	5	CHEM5182	ADVANCED TOPICS IN MA THESIS	Z	4	0	0	0	5
	CHEM5001	SPECTROSCOPIC METHODS IN ANALYTICAL CHEMISTRY	Z	3	0	0	3	6	CHEM5172	SEMINAR (CLASS)	Z	0	2	0	0	5
	CHEM5003	ADVANCED INORGANIC CHEMISTRY	Z	3	0	0	3	6	CHEM5002	PHYSICAL CHEMISTRY OF ATOM AND MOLECULAR SYSTEMS	Z	3	0	0	3	7
	CHEM5037	MA THESIS I	Z	0	1	0	0	1	CHEM5004	ADVANCED ORGANIC CHEMISTRY	Z	3	0	0	3	7
									CHEM5042	MA THESIS II	Z	0	1	0	0	1
	CHEM5005	ADVANCED ANALYTICAL CHEMISTRY	S	3	0	0	3	6	CHEM5006	CHROMATOGRAPHIC METHODS IN ANALYTICAL CHEMISTRY	S	3	0	0	3	6
	CHEM5007	SAMPLE PREPARATION METHODS IN ANALYTICAL CHEMISTRY	S	3	0	0	3	6	CHEM5008	MASS SPECTROMETRIC METHODS	S	3	0	0	3	6
	CHEM5009	INTRODUCTION TO CHEMOMETRICS	S	3	0	0	3	6	CHEM5010	INTRODUCTION TO ATOMIC SPECTROSCOPY	S	3	0	0	3	6
	CHEM5011	POTENTIOMETRY IN ANALYTICAL CHEMISTRY	S	3	0	0	3	6	CHEM5012	NUCLEAR ANALYTICAL TECHNIQUES	S	3	0	0	3	6
	CHEM5013	SPECTROSCOPIC METHODS IN INORGANIC CHEMISTRY	S	3	0	0	3	6	CHEM5014	SELECTED TOPICS IN COORDINATION CHEMISTRY	S	3	0	0	3	6
	CHEM5015	THERMAL ANALYSIS METHODS	S	3	0	0	3	6	CHEM5016	CYCLIC VOLTAMMETRY	S	3	0	0	3	6
	CHEM5017	INDUSTRIAL INORGANIC CHEMISTRY	S	3	0	0	3	6	CHEM5018	RESEARCH METHODS IN INORGANIC CHEMISTRY	S	3	0	0	3	6
	CHEM5019	ACIDS, BASES AND SOLVENTS	S	3	0	0	3	6	CHEM5020	CHEMISTRY OF COORDINATION COMPOUNDS IN SOLUTIONS	S	3	0	0	3	6
	CHEM5021	SMART POLYMERS	S	3	0	0	3	6	CHEM5022	CHEMISTRY OF ELEMENTS	S	3	0	0	3	6
	CHEM5023	POROUS MATERIALS	S	3	0	0	3	6	CHEM5024	OXIDATION AND REDUCTION REACTIONS IN INORGANIC CHEMISTRY	S	3	0	0	3	6
	CHEM5025	ADVANCED BIOCHEMISTRY	S	3	0	0	3	6	CHEM5026	ADVANCED ANALYSIS TECHNIQUES OF BIOMOLECULES	S	3	0	0	3	6
	CHEM5027	PHYSIOCHEMICAL TREATMENT TECHNIQUES WASTE WATER	S	3	0	0	3	6	CHEM5028	ELECTRONIC THEORIES IN ORGANIC CHEMISTRY	S	3	0	0	3	6
	CHEM5029	SEPERATION AND PURIFICATION	S	3	0	0	3	6	CHEM5030	ION-EXCHANGERS AND THEIR	S	3	0	0	3	6

	TECHNIQUES IN ORGANIC CHEMISTRY								PHYSICAL CHEMISTRY										
CHEM5031	SEPARATION METHODS IN ANALYTICAL CHEMISTRY	S	3	0	0	3	6	CHEM5032	SYNTHETIC SPECIALTY POLYMERS	S	3	0	0	3	6				
CHEM5033	ADSORPTION METHODS IN ANALYTICAL CHEMISTRY	S	3	0	0	3	6	CHEM5034	HETEROGENEOUS CATALYSIS	S	3	0	0	3	6				
CHEM5035	ANALYSIS METHODS FOR WEAK ENERGY BONDS	S	3	0	0	3	6	CHEM5036	INTRODUCTION TO NANOTECHNOLOGY	S	3	0	0	3	6				
								CHEM5038	ORGANIC REACTIONS KNOWN WITH SPECIAL NAMES	S	3	0	0	3	6				
								CHEM5040	ELECTROANALYTICAL CHEMISTRY	S	3	0	0	3	6				
Total Credits								12	30	Total Credits								9	30
STAGE THESIS	III. TERM / FALL								IV. TERM / SPRING										
	CHEM5173	SEMINAR(THESIS)	Z	0	2	0	0	5	CHEM5184	ADVANCED TOPICS IN MA THESIS IV	Z	4	0	0	0	5			
	CHEM5183	ADVANCED TOPICS IN MA THESIS III	Z	4	0	0	0	5	CHEM5194	MA THESIS IV	Z	0	1	0	0	25			
	CHEM5193	MA THESIS III	Z	0	1	0	0	20											
	Total Credits								0	30	Total Credits								0
TOTAL CREDITS: 21 - TOTAL ECTS: 120																			

Not: After the student receives compulsory course of registered discipline, 3 credits of elective courses will take 2 or 3 pieces
 Students may take compulsory courses of other disciplines as an elective
 If the student wants to may choose one selective course from another department with the endorsement of the supervisor



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2015-2016 ACADEMIC YEAR COURSE PLAN

DEPARTMENT OF	DEPARTMENT OF CHEMISTRY
DEPARTMENT / PROGRAM	DOCTORAL PROGRAM

COURSE STAGE	I. TERM / FALL								II. TERM / SPRING							
	Code	Course Title	Type	T	U	L	Credit	ECTS	Code	Course Title	Type	T	U	L	Credit	ECTS
	FEN6001	RESEARCH METHODS	Z	2	0	0	2	4	CHEM6172	SEMINAR (CLASS)	Z	0	2	0	0	4
	CHEM 6051	PHD THESIS I	Z	0	1	0	0	1	CHEM 6050	PHD THESIS II	Z	0	1	0	0	1
	CHEM6181	ADVANCED TOPICS IN PHD THESIS I	S	4	0	0	0	5	CHEM6182	ADVANCED TOPICS IN PHD THESIS II	S	4	0	0	0	5
	CHEM6003	PRACTICES OF GROUP THEORY IN MOLECULAR SPECTROSCOPY	S	3	0	0	3	5	CHEM6002	FACTOR ANALYSIS IN CHEMISTRY	S	3	0	0	3	5
	CHEM6005	DESIGN OF MOLECULE IN ORGANIC	S	3	0	0	3	5	CHEM6004	MICROMETHODS IN ANALYTICAL CHEMISTRY	S	3	0	0	3	5
	CHEM6007	LIQUID CHROMATOGRAPHY	S	3	0	0	3	5	CHEM6006	COUPLED METHODS IN CHROMATOGRAPHY	S	3	0	0	3	5
	CHEM6009	ACTIVATED CARBON ADSORPTION AND APPLICATIONS	S	3	0	0	3	5	CHEM6008	CHEMOMETRIC METHODS	S	3	0	0	3	5
	CHEM6011	ANALYTICAL TECHNIQUES IN VOLTAMMETRY	S	3	0	0	3	5	CHEM6010	BIOANALYTICAL CHEMISTRY	S	3	0	0	3	5
	CHEM6013	ANALYTICAL CHEMISTRY OF COMPLEX MATRICES	S	3	0	0	3	5	CHEM6012	ASYMMETRIC SYNTHESIS IN ORGANIC CHEMISTRY	S	3	0	0	3	5
	CHEM6015	ATOMIC SPECTROSCOPIC METHODS	S	3	0	0	3	5	CHEM6014	NUCLEAR MAGNETIC RESONANCE SPECTROSCOPY IN ORGANIC STRUCTURE IDENTIFICATION	S	3	0	0	3	5
	CHEM6017	MECHANISMS OF MOLECULAR REARRANGEMENTS I	S	3	0	0	3	5	CHEM6016	INTERFACIAL SCIENCE II	S	3	0	0	3	5
	CHEM6019	PRINCIPLES OF ORGANIC SYNTHESIS I	S	3	0	0	3	5	CHEM6018	SOLID STATE CHEMISTRY	S	3	0	0	3	5
	CHEM6021	CATALYSIS	S	3	0	0	3	5	CHEM6020	ELECTROCHEMICAL SENSORS	S	3	0	0	3	5
	CHEM6023	CRYSTAL CHEMISTRY	S	3	0	0	3	5	CHEM6022	ADVANCED MATERIAL CHEMISTRY	S	3	0	0	3	5
	CHEM6025	NATURAL ANTIOXIDANTS	S	3	0	0	3	5								
	CHEM6027	MOLECULAR SYMMETRY AND APPLICATIONS	S	3	0	0	3	5	CHEM6024	ADVANCED BIOINORGANIC CHEMISTRY	S	3	0	0	3	5
	CHEM6029	BORON CHEMISTRY	S	3	0	0	3	5	CHEM6026	REACTION MECHANISMS IN INORGANIC	S	3	0	0	3	5
	CHEM6031	ADVANCED ORGANOMETALLIC CHEMISTRY	S	3	0	0	3	5	CHEM6028	MOLECULAR RECOGNITION AND BIOMOLECULE COMPLEXES	S	3	0	0	3	5
	CHEM6035	ION-EXCHANGERS AND THEIR APPLICATIONS	S	3	0	0	3	5	CHEM6030	FRACTIONATION AND SPECIATION METHODS IN FOOD SAMPLES	S	3	0	0	3	5
	CHEM6037	PROTEIN PURIFICATION AND CHARACTERIZATION	S	3	0	0	3	5	CHEM6032	INORGANIC POLYMERS	S	3	0	0	3	5

CHEM6039	INTERFACESCIENCE I	S	3	0	0	3	5	CHEM 6034	X-RAY CRYSTALLOGRAPHY	S	3	0	0	3	5		
CHEM6041	ADVANCEDPOLYMER SCIENCEAND TECHNOLOGYI	S	3	0	0	3	5	CHEM6036	POLYMER KINETIC THEORIES	S	3	0	0	3	5		
CHEM6043	OXIDATION MECHANISMS IN ORGANIC CHEMISTRY	S	3	0	0	3	5	CHEM6038	ADVANCEDPOLYMER SCIENCEAND TECHNOLOGY II	S	3	0	0	3	5		
CHEM6045	QUALITY CONTROL IN ANALYTICAL CHEMISTRY	S	3	0	0	3	5	CHEM6040	MACROMOLECULAR CHEMISTRY	S	3	0	0	3	5		
CHEM6047	ADVANCED COORDINATION CHEMISTRY	S	3	0	0	3	5	CHEM6042	STRUCTURE IDENTIFICATION IN ORGANIC CHEMISTRY	S	3	0	0	3	5		
CHEM6049	OPTICAL AND CHEMICAL SENSORS	S	3	0	0	3	5	CHEM6044	MECHANISMS OF MOLECULAR REARRANGEMENTS II	S	3	0	0	3	5		
								CHEM6046	PRINCIPLES OF ORGANIC SYNTHESIS II	S	3	0	0	3	5		
								CHEM6048	CORROSION AND ITS ELECTROCHEMICAL BASICS	S	3	0	0	3	5		
Total Credits							14	30	Total Credits							12	30
III. TERM / FALL								IV. TERM / SPRING									
CHEM6183	ADVANCED TOPICS IN PHD THESIS	Z	4	0	0	0	5	CHEM6174	SEMINAR(THESIS)	Z	0	2	0	0	5		
CHEM6193	PHD THESIS III	Z	0	1	0	0	15	CHEM6184	ADVANCED TOPICS IN PHD THESIS	Z	4	0	0	0	5		
CHEM 6177	PHD PROFICIENCY EXAMINATION	Z	0	0	0	0	10	CHEM6194	PHD THESIS IV	Z	0	1	0	0	20		
Total Credits							0	30	Total Credits							0	30
V. TERM / FALL								VI. TERM / SPRING									
ENS6121	DEVELOPMENT AND LEARNING	Z	3	0	0	0	5	ENS6122	PLANNING AND EVALUATION IN EDUCATION	Z	3	2	0	0	5		
CHEM6185	ADVANCED TOPICS IN PHD THESIS V	Z	4	0	0	0	5	CHEM6186	ADVANCED TOPICS IN PHD THESIS VI	Z	4	0	0	0	5		
CHEM6195	PHD THESIS V	Z	0	1	0	0	20	CHEM6196	PHD THESIS VI	Z	0	1	0	0	20		
Total Credits							0	30	Total Credits							0	30
VII. TERM / FALL								VIII. TERM / SPRING									
CHEM6187	ADVANCED TOPICS IN PHD THESIS VII	Z	4	0	0	0	5	CHEM6188	ADVANCED TOPICS IN PHD THESIS VIII	Z	4	0	0	0	5		
CHEM6197	PHD THESIS VII	Z	0	1	0	0	25	CHEM6198	PHD THESIS VIII	Z	0	1	0	0	25		
Total Credits							0	30	Total Credits							0	30
TOTAL CREDITS: 26 - TOTAL ECTS: 240																	

Not: The student is expected to take a total of 3 credited 4 (four) selective courses every academic term.

The student has the option of choosing one selective course from another department with the endorsement of the supervisor. *Success in Ph.D. qualifying exam is a prerequisite.