

ATOMIC SPECTROSCOPIC METHODS

1	Course Title:	ATOMIC SPECTROSCOPIC METHODS	
2	Course Code:	KIM6015	
3	Type of Course:	Optional	
4	Level of Course:	Third Cycle	
5	Year of Study:	1	
6	Semester:	1	
7	ECTS Credits Allocated:	6.00	
8	Theoretical (hour/week):	3.00	
9	Practice (hour/week):	0.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:	None	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Prof. Dr. BELGIN İZGİ	
15	Course Lecturers:	Prof. Dr. Belgin İZGİ Doç. Dr. Elif TÜMAY ÖZER Doç. Dr. Ümran SEVEN ERDEMİR	
16	Contact information of the Course Coordinator:	belgin@uludag.edu.tr 0 224 29 41 728	
17	Website:		
18	Objective of the Course:	The aim of the course to give basic principles about atomization mechanism which is currently used in the field of atomic spectroscopy (AAS, ET-AAS, HG-AAS, ICP-OES, ICP-MS, MWP-AES, XRF). So that students may encounter in graduate study and application of methods of elemental analysis techniques to be successful in their aims.	
19	Contribution of the Course to Professional Development:		
20	Learning Outcomes:		
		1	Understands the purpose of atomic spectroscopy techniques.
		2	Knows what to use atomic spectroscopy techniques suitable for analytes.
		3	Can apply the spectroscopy techniques in the laboratory.
		4	Take advantage of adsorption techniques for their postgraduate studies and evaluate their results.
		5	Can search the literature about spectroscopic methods and transfer this information into a presentation.
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21	Course Content:		
		Course Content:	
Week	Theoretical	Practice	

1	Basic concepts related to atomic spectroscopy	
2	The basic principles of Atomic Absorption Spectrometry (AAS), (AAAS / ET-AAS / HG-AAS)	
3	AAS device information	
4	Application areas of AAS techniques	
5	The basic principles of Inductively Coupled Plasma Spectrometry (ICP) (ICP-OES, ICP-MS, MWP-AES)	
6	ICP device information	
7	Application areas of ICP techniques	
8	The basic principles of X-ray Fluorescence Spectrometry (XRF) (EDXRF/ WDXRF)	
9	XRF device information	
10	Application areas of XRF techniques	
11	Midterm Exam + Application areas of XRF techniques	
12	Principles of evaluation of quantitative analysis results with atomic spectroscopy techniques (linear range, LOD, LOQ, calibration techniques)	
13	Homework presentations	
14	Evaluation of course	

Measurement and Evaluation Techniques Used in the Course	
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[illegible]

ÖK4	0	5	0	0	4	0	0	0	0	0	0	0	0	0	0	0
ÖK5	0	0	0	5	0	0	4	5	0	0	0	0	0	0	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contribution Level:	1 very low		2 low		3 Medium		4 High		5 Very High							