

## AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Environmental Analytical Chemistry							
Course Code		KIM602		Couse Level		Third Cycle (Doctorate Degree)			
ECTS Credit 8		Workload	194 <i>(Hours)</i>	Theory	3	Practice	0	Laboratory	0
Objectives of the Course		Teach environmental sample's analysis with analytical methods							
Course Content		Analytical methods used in environmental samples.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods Explanation (Presentation), Demonstration, Discussion									
Name of Lecturer(s)									

#### **Assessment Methods and Criteria**

Method	Quantity	Percentage (%)	
Midterm Examination	1	20	
Final Examination	1	60	
Assignment	4	20	

## **Recommended or Required Reading**

1 Lecturer notes (Prof.Dr. Mustafa DEMİR)

Week	Weekly Detailed Course Contents					
1	Theoretical	Description of the environment and pollution, the need for chemical analysis				
2	Theoretical	Sampling and sample types				
3	Theoretical	Extraction for sample preparation				
4	Theoretical	Sample preparation enrichment				
5	Theoretical	Water analysis - major components				
6	Theoretical	Water analysis - trace impurities (organic trace impurities, metal ions)				
7	Theoretical	Analysis of solids and wastes				
8	Intermediate Exam	Midterm Exam				
9	Theoretical	Atmospheric analysis - gases				
10	Theoretical	Atmospheric analysis - particles				
11	Theoretical	Ultra - trace analysis				
12	Theoretical	Food analysis				
13	Theoretical	Quality control analysis				
14	Theoretical	Student Presentations				
15	Theoretical	Student Presentations				
16	Final Exam	Final Exam				

# **Workload Calculation**

Activity	Quantity	Preparation		Duration		Total Workload
Lecture - Theory	14		0	3		42
Assignment	4		25	1		104
Midterm Examination	1		20	1		21
Final Examination	1		25	2		27
Total Workload (Hours)						194
[Total Workload (Hours) / 25*] = ECTS					8	
*25 hour workload in accounted on 1 ECTS						

"25 hour workload is accepted as 1 ECTS

### Learning Outcomes

- 1 Methods of collection and analysis of environmental samples
- 2 Evaluation of environmental pollution



3	To learn the relationship between analytical chemistry and environmental chemistry.
4	Learning the environmental sample analysis methods.
5	Solving problems related to environmental analysis methods.

### **Programme Outcomes** (Chemistry Doctorate)

Progra	amme Outcomes (Chemistry Doctorate)
1	Depending on the master degree competences, develops, insights and innovates current and advanced knowledge and/or research in proficiency level.
2	Gains high skill levels in using research methods in the field of his/her study.
3	Comprehends the interaction between disciplines related to his/her field. Reaches to original results using his/her expertise in order to analyze, synthesize and evaluate new and complicated ideas.
4	Enlarges the boundaries of his/her field of knowledge by publishing at least one research paper in national and/or international peer-reviewed journals.
5	Defends his/her original opinions related to his/her field before authority and communicates effectively illustrating his/her competence.
6	May communicate and debate written, orally and visually in European Language Portfolio level C1.
7	Follows the developments in computer software and information and communication technologies developed for his/her research area and uses these in order to solve research problems.
8	Collaborates for scientific research with national and international research teams.
9	Contributes to the course of creation and maintenance of knowledge based society and by introducing the scientific, social and cultural developments to the society he/she is living in.

## Contribution of Learning Outcomes to Programme Outcomes 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

	L1	L2	L3	L4	L5
P1	4	5	4	5	4
P2	4	5	4	5	4
P3	4	5	4	5	4
P4	4	5	4	5	4
P5	4	5	4	5	4

