

Lecture Code- Name: İLT 524 SAMPLİNG AND SAMPLE PREPARATION							Name of the Programme: ADVANCED TECHNOLOGIES			
Semester	Teaching Methods							Credits		
	Lecture	Appl.	Lab.	Project/Field works	Term Hmw.	Other	Total	Credit	ECTS Credit	
1-2	42			26	100	20	188	3	7,5	
Language	Turkish									
Compulsory /Elective	Elective									
Prerequisites	None									
Course Contents	Sampling techniques for chemical analysis. Sampling preparation methods before analysis. Sampling preparation methods for organic materials. Sampling preparation methods for inorganic materials and element speciation. Application of sampling preparation for real life materials gathering from different origins (environmental, food, biological, clinical, forensic, etc).									
Course Objectives	<ul style="list-style-type: none"> • Introduction of sampling and sample preparation for chemical analysis. • To represent importance of sampling and sample preparation at chemical analysis stages and to emphasize its role to obtain accurate results from any chemical analysis. • To demonstrate steps of new analysis method while it is developing. 									
Learning Outcomes and Competences	<ul style="list-style-type: none"> • Ability of describing a problem and solving it by using science and engineering knowledge • Ability of conduct of interdisciplinary study • Obtaining an information about current subjects 									
Text Book and/or References	<ol style="list-style-type: none"> 1. Mester Z., Sturgeon R.E., Sample Preparation for Trace element Analysis, Elsevier 2. Pawliszyn J., Sampling and Sample Preparation Techniques for Field and Laboratory, Elsevier, 3. Woodget B.W., Cooper D., Samples and Standarts, Wiley 4. Anderson R., Sample Pretreatment and Separation, Wiley 5. Mitra S., Sample Preparation Techniques in Analytical Chemistry , Wiley 6. Zhang C., Fundamentals of Environmental Sampling and Analysis, Wiley 7. Settle F.A., Handbook of Instrumental Techniques for Analytical Chemistry, Prentice Hall 									
Assessment Criteria								If any mark as(X)	Percentage %(*)	
	<i>Midterm exams</i>								30	
	Quizes									
	Homework's									
	Projects									
	Term Homework's								20	
	Laboratory									
	Others								10	
	Final Exam								40	
Instructors	Yrd. Doç. Dr. Nihat COŞKUN									
Weeks	Subjects									
1-2	Introduction of chemical analysis									
3	General information about sampling and sample preparation									
4	Methodology of sampling and sample preparation									
5	Sample preparation techniques									
6	Selection criteria of sample preparation techniques									
7-8	Sample preparation for organic materials.									
	MİD TERM									
9-10	Sample preparation for inorganic materials.									
11	Element speciation									
12-14	Different techniques of gathering samples from different origins and preperation of those samples for chemical analysis.									

