

SEPARATION METHODS IN ANALYTICAL CHEMISTRY

1	Course Title:	SEPARATION METHODS IN ANALYTICAL CHEMISTRY	
2	Course Code:	KIM5031	
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:		
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Prof. Dr. ELİF TÜMAY ÖZER	
15	Course Lecturers:	Prof.Dr. M.Haluk Türkdemir Prof.Dr.Belgin İZGİ	
16	Contact information of the Course Coordinator:	Prof.Dr. Elif TÜMAY ÖZER etumay@uludag.edu.tr 2942866	
17	Website:		
18	Objective of the Course:	Analytical Chemistry is a dynamic discipline. The analytical chemist are constantly working to develop new separation techniques and to increase precision, speed and accuracy of new analytical techniques. Therefore, this course aims to solve problems is to teach how to use the analytical separation techniques.	
19	Contribution of the Course to Professional Development:	Learns the separation methods.	
20	Learning Outcomes:		
		1	Knows the chemical and physical separation methods
		2	Knows the chromatographic methods
		3	Can choose separation technique by the help of the relationship between the matrix feature and the concerned analyte in the matrix
		4	May follow innovations by searching literature in related issues
		5	Transfers the knowledge learned in this lesson to post-graduate works
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21	Course Content:		
		Course Content:	
Week	Theoretical	Practice	
1	The basic principles of separation		
2	The basic principles of separation		

3	Physical and chemical separation methods	
4	Physical and chemical separation methods	
5	Physical and chemical separation methods	
6	Introduction to chromatographic separations	
7	Chromatographic methods (GC)	
8	Midterm Exam+ Repetition of previous issues	
9	Chromatographic methods (LC)	
10	Chromatographic methods (CE)	
11	Recent developments in chromatography	
12	Midterm Exam+ Repetition of previous issues	
13	Literature investigations	
14	Literature investigations	

22	Textbooks, References and/or Other Materials:	1-Separation Process Principles, J. D. Seader and Ernest J. Henley 2-Chromatography and Separation Science, Volume 4 (Separation Science and Technology), Satinder Ahuja 3-Internet
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23	Assesment	
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TERM LEARNING ACTIVITIES		NUMBER	WEIGHT		
Midterm Exam		1	20.00		
Activites			Number	Duration (hour)	Total Work Load (hour)
Final Exam	Theoretical	1	60.00	3.00	42.00
Practicals/Labs			0	0.00	0.00
Contribution of Term (Year) Learning Activities to Self study and preparation		40.00	14	6.00	84.00
Homeworks			0	0.00	0.00
Contribution of Final Exam to Success Grade		60.00	0	0.00	0.00
Field Studies			0	0.00	0.00
Measurement and Evaluation Techniques Used in the Course			The system of relative evaluation is applied		
Others			0	0.00	0.00
Final Exams			1	30.00	30.00
Total Work Load					196.00
Total work load/ 30 hr					5.87
ECTS Credit of the Course					6.00

25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	PQ11	PQ12	PQ13	PQ14	PQ15	PQ16
ÖK1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK2	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK4	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0

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