

CHROMATOGRAPHIC METHODS IN ANALYTICAL CHEMISTRY

1	Course Title:	CHROMATOGRAPHIC METHODS IN ANALYTICAL CHEMISTRY	
2	Course Code:	KIM5006	
3	Type of Course:	Optional	
4	Level of Course:	Second Cycle	
5	Year of Study:	1	
6	Semester:	2	
7	ECTS Credits Allocated:	7.00	
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. BELGIN İZGİ	
15	Course Lecturers:	Prof. Dr. Şeref GÜÇER, Prof. Dr. Cevdet DEMİR, Doç. Dr. M. Haluk TÜRKMİR	
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 is to make the students gain the basic subjects of chromatographic separation methods and applications. So that students may encounter in graduate studies at the high-pressure liquid chromatography (HPLC) and gas chromatography (GC) methods in the analysis techniques is expected to be successful.	
19	Contribution of the Course to Professional Development:		
20	Learning Outcomes:		
		1	Understand the purpose of chromatographic methods.
		2	Knows what to use chromatographic methods suitable for analytes.
		3	Can apply the chromatographic methods in the laboratory.
		4	Selects appropriate chromatographic method for their graduate studies and evaluate the results.
		5	Can search the literature about chromatographic methods and transfer this information into a presentation.
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21	Course Content:		
		Course Content:	
Week	Theoretical	Practice	
1	Introduction to chromatographic separations		

2	The basic principles of the chromatography	
3	Classification of Chromatographic Methods	
4	Principles of Gas Chromatography	
5	Gas Chromatography Instruments (column-injection-detectors)	
6	Application Areas of Gas Chromatography	
7	Sampling Systems on Gas Chromatography	
8	The review of literature about gas chromatography	
9	Midterm Exam + gas chromatography	
10	Principles of Liquid Chromatography	
11	Liquid chromatography (column-pump-injection-detectors)	
12	Application Areas of Liquid Chromatography	
13	Sample Preparation in Liquid Chromatography	
14	The review of literature about liquid chromatography	
22	Textbooks, References and/or Other Materials:	1)Chromatographic Methods, A. Braithwaite and J.F. Smith. 2)Principles and Practice of Modern Chromatographic Methods, Kevin Robards, P. E. Jackson, Paul R. Haddad. 3)Web sources (web of science)
23	Assesment	
TERM LEARNING ACTIVITIES		NUMBER
		WEIGHT
Midterm Exam		1
		25.00
Quiz		0
		0.00
Home work-project		1
		25.00
Final Exam		1
		50.00
Total		3
		100.00
Contribution of Term (Year) Learning Activities to Success Grade		50.00
Contribution of Final Exam to Success Grade		50.00
Total		100.00
Measurement and Evaluation Techniques Used in the Course		
24	ECTS / WORK LOAD TABLE	

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	3.00	42.00
Practicals/Labs	0	0.00	0.00
Self study and preperation	14	6.00	84.00
Homeworks	1	40.00	40.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	30.00	30.00
Others	0	0.00	0.00
Final Exams	1	40.00	40.00
Total Work Load			236.00
Total work load/ 30 hr			7.87
ECTS Credit of the Course			7.00

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	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK2	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK3	0	0	0	5	4	0	0	0	0	0	0	0	0	0	0	0
ÖK4	5	0	4	5	4	0	0	0	0	0	0	0	0	0	0	0
ÖK5	0	0	0	5	0	0	4	4	4	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							