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 TÜRKDEMİR
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)

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	3.00	42.00
Midterm Exam	1	25.00	
Practicals/Labs	0	0.00	0.00
Self study and preparation	14	6.00	84.00
Home work-project	1	25.00	
Homeworks	1	40.00	40.00
Projects	0	0.00	0.00
Total	3	100.00	
Field Studies	0	0.00	0.00
Success Grade	1	30.00	30.00
Others	0	0.00	0.00
Final Exams	1	40.00	40.00
Total		100.00	
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**