

GENERAL CHEMISTRY III (ANALYTIC CHEMISTRY)

1	Course Title:	GENERAL CHEMISTRY III (ANALYTIC CHEMISTRY)	
2	Course Code:	KIM2013	
3	Type of Course:	Compulsory	
4	Level of Course:	First Cycle	
5	Year of Study:	2	
6	Semester:	3	
7	ECTS Credits Allocated:	3.00	
8	Theoretical (hour/week):	2.00	
9	Practice (hour/week):	2.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:	None	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Doç. Dr. SEVGÜL ÇALIŞ	
15	Course Lecturers:		
16	Contact information of the Course Coordinator:	scalıs@uludag.edu.tr, 224 2942227, Uludağ Üniversitesi Eğitim Fakültesi, A Blok, İlköğretim Bölümü, 16059 Nilüfer,Bursa	
17	Website:		
18	Objective of the Course:	The purpose of this course is to give the ability of performing analytical chemistry analysis methods to students.	
19	Contribution of the Course to Professional Development:		
20	Learning Outcomes:		
		1	Recognizes structure and components of matter
		2	Recognizes the methods of determination of unknown matters
		3	recognizes the steps of chemical processes.
		4	Analyzes and estimates the data in the related scientific problem
		5	Gains ability on research and learns scientific method
		6	Applies the content of this course daily life.
		7	Gets information about definition, formulation and solution of problems
		8	Uses qualitative and quantitative analysis techniques, skills, and modern tools necessary for practice in chemistry
		9	
		10	
21	Course Content:		
		Course Content:	
Week	Theoretical	Practice	
1	Description and purpose of analytical chemistry	Student presentations related the topic	
2	Methods for the identification of qualitative and quantitative analysis	Student presentations related the topic	
3	The errors on chemical analysis	Problem solving	

4	Solutions, solvents, solubility, solution of concentrations	Problem solving
5	Important chemical reactions for analytical chemistry: precipitation	Problem solving
6	Neutralization and complex reactions	Problem solving
7	Redox reactions	Problem solving
8	Chemical equilibrium, homogen and heterogen of equilibrium reactions	Problem solving
9	Acids and bases, weak acids and weak bases, strong acids and strong bases, monoacid-monobase, polyfunctional acids	Acid and base titrations
10	pH and pOH, acids and bases of equilibras, buffer solutions.	Problem solving
11	Quantitative analysis: gravimetric analysis,	Problem solving
12	Titrimetric analysis	Problem solving
13	Nonaqueus media titrations, complexometric analysis	Problem solving
14	Methods of instrumental analysis.	Problem solving

Activites			Number	Duration (hour)	Total Work Load (hour)
23	Assesment		14	2.00	28.00
	Theoretical				
Practicals/Labs			14	2.00	28.00
Self study and preperation		1	40.00	5.00	70.00
Midterm Exam					
Homeworks			0	0.00	0.00
Projects					
Home work-project		0	0.00	0.00	0.00
Field Studies			0	0.00	0.00
Midterm exams		2	5.00	10.00	10.00
Total			100.00		
Others			0	0.00	0.00
Success Grade					
Final Exams			1	15.00	15.00
Total Work Load					151.00
Total work load/ 30 hr			100.00		5.03
ECTS Credit of the Course					3.00
Course					
24	ECTS / WORK LOAD TABLE				

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	5	5	0	0	4	0	0	0	4	0	0	0	0	0	0	0
ÖK2	0	0	0	0	5	0	0	0	4	0	0	0	0	0	0	0
ÖK3	5	0	0	0	4	0	0	0	4	0	0	0	0	0	0	0

ÖK4	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK5	0	4	0	0	5	0	0	0	5	5	0	0	0	0	0	0
ÖK6	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0
ÖK7	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK8	0	5	0	0	0	0	0	0	0	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			