

GENERAL CHEMISTRY

1	Course Title:	GENERAL CHEMISTRY	
2	Course Code:	KIM1077	
3	Type of Course:	Compulsory	
4	Level of Course:	First Cycle	
5	Year of Study:	1	
6	Semester:	1	
7	ECTS Credits Allocated:	3.00	
8	Theoretical (hour/week):	3.00	
9	Practice (hour/week):	0.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:	None	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Doç. Dr. HASENE MUTLU GENÇKAL	
15	Course Lecturers:	Doç. Dr. Hasene Mutlu Gençkal Arş. Gör. Dr. Yeliz Ulaş	
16	Contact information of the Course Coordinator:	hasenem@uludag.edu.tr 02242941734	
17	Website:		
18	Objective of the Course:	To introduce students to the basic concepts of chemistry science and to provide a chemistry background for improving the understanding of subsequent professional courses.	
19	Contribution of the Course to Professional Development:		
20	Learning Outcomes:		
		1	Have an understanding of importance and fundamentals of chemistry science.
		2	Have the ability of understanding and using chemical terms when identifying and solving professional problems.
		3	Become familiar with chemical compounds and know the formulation and naming rules.
		4	Have an adequate knowledge about chemical reactions and necessary conditions and be able to solve stoichiometric calculations.
		5	Have an understanding of solution types and solution concentrations and use them in related calculations.
		6	Have the theoretical background for chemical laboratory practices.
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21	Course Content:		
		Course Content:	
Week	Theoretical	Practice	

1	Introduction to the course (objective, content, grading...) granular and porous structure of matter, mobility of particles	
2	States of matter, matter and energy, changes of state	
3	Classification of matter, pure matters, mixtures, physical and chemical alterations, elements and compounds, separation of the mixtures.	
4	Structure of atom (atomic theory, the structure of atom, subatomic particles, atomic number, mass number, isotopes, electron configurations, periodic table)	
5	Chemical bonds (bonding properties and lack of reactivity, covalent bonds, ionic bonds, polar covalent bonds)	
6	Attraction forces between particles and holistic view of the matter (Atomic lattice, van der Waals forces, metallic lattices, molecular lattices, ionic lattices, geological structures, rocks and minerals)	
7	Molecules, ions and chemical formulas (molecules, ions, molecular formula, rough formula, formulas of ionic compounds, naming of ionic-molecular compounds, naming of acids and bases)	
8	Repeating courses and midterm exam	
9	Chemical reactions and calculations (calculation of molecular and formula weight, concept of mole, writing and equalization of chemical equations)	
10	Determining the amount of reagents and products in chemical equations, limiting reagent, reaction efficiency)	
11	General properties of aqueous solutions, electrolyte and non-electrolyte solutions, precipitation reactions, molecular and ionic equations	
12	Acid-base reactions, reduction-oxidation reactions	
13	Solution concentrations, solution stoichiometry	
14	Gases (gaseous substances, gas pressure, gas laws, ideal gas equation, gas stoichiometry, Dalton's law)	

22	Textbooks, References and/or Other Materials:	-“General Chemistry- Basic Concepts”, Raymond Chang, Palme Inc., Ankara, 2009. -“General Chemistry” Basri Atasoy, Gündüz Education and Inc., Ankara, 2000. -“Chemistry-Basic Concepts”, Namık K. Tunalı, Namık K. Aras, Başarı Inc., Ankara, 1987.
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23	Assesment		
TERM LEARNING ACTIVITIES		NUMBE R	WEIGHT
Midterm Exam		1	40.00
Quiz		0	0.00
Home work-project		0	0.00
Final Exam		1	60.00

Total	2	100.00
Contribution of Term (Year) Learning Activities to Success Grade		40.00
Contribution of Final Exam to Success Grade		60.00
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	1.50	21.00
Homeworks	0	0.00	0.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	14.00	14.00
Others	0	0.00	0.00
Final Exams	1	20.00	20.00
Total Work Load			97.00
Total work load/ 30 hr			3.23
ECTS Credit of the Course			3.00

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	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK3	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK4	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK6	5	0	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			