CHEMISTRY

1	Course Title:	CHEMISTRY
2	Course Code:	OTPZ105
3	Type of Course:	Compulsory
4	Level of Course:	Short Cycle
5	Year of Study:	1
6	Semester:	1
7	ECTS Credits Allocated:	4.00
8	Theoretical (hour/week):	2.00
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:	Öğr.Gör. SERMET ÇELİKÇAPA
15	Course Lecturers:	
16	Contact information of the Course Coordinator:	Dr. Ayşe Hilal Ulukardeşler ulukardesler@uludag.edu.tr 0-224-2942377
17	Website:	
18	Objective of the Course:	To develop an ability to solve basic quantitative problems regarding the properties of molecules, chemical equilibria, chemical kinetics, and to develop the ability to appropriately apply this knowledge to general scientific problems in various fields of science and engineering
19	Contribution of the Course to Professional Development:	
20	Learning Outcomes:	

	1	To learn the structure of matter
	2	To learn the structure and properties of atoms
	3	To learn the chemical bondings
	4	To learn the molecular geometry
	5	To learn the concept of chemical equilibrium
	6	To learn general properties of gases and gas laws
	7	To learn general properties of liquid and liquid laws
	8	To learn general properties of solid and solid laws
	9	To learn general properties of solutions and solutions laws
	10	

21	Course Content:	
	Course Content:	
Week	Theoretical	Practice

1	Course description, explanation of topics, activities, evaluation methods and the functioning	
2	Matter, compounds, and mixtures, physical and chemical properties; SI system, units, measurements, accuracy and precision	
3	Structure of atoms, electron, notron, proton, atomic weight, isotopes, izobars	
4	Periodic table; classification of elements, oxidation states of elements, sizes of atoms and ions, electronegativity	
5	Types of chemical compounds, formulas of chemical compounds	
6	Chemical bonding, classification of bonds, ionic bonding, covalent bonding, writing Lewis Structures, Octet Rule	
7	Formal charge, polarity, dipole moment, coordinative covalent bonding	
8	Repeating courses and midterm exam	
9	Mole concept, chemical reactions, oxidation reactions, redox reactions	
10	Properties of gases and pressure, The Ideal Gas Equation, gas properties relating to the Kinetic-Molecular Theory	
11	Properties of liquids, viscosity, surface tension, vaporization of Liquids, vapor pressure and entropy	
12	Solutions and their physical properties, some terminology, solution concentration	
22	Textbooks, References and/or Other	Chang, R., "Chemistry", Mc Graw Hill Inc, 2009 Olmsted, J., &Williams, G. M., Chemistry, John Wiley& Sons
23	Assessment	

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	2.00	28.00
Practicals/Labs	0	0.00	0.00
Self study and preperation	1	1.00	1.00
Homeworks	0	0.00	0.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	4.00	4.00
Others	0	0.00	0.00
Final Exams	1	5.00	5.00
Total Work Load			38.00
Total work load/ 30 hr			1.27
ECTS Credit of the Course			4.00

Midterm Exam	1	40.00
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**

25	**CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS**

	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	PQ11	PQ12	PQ13	PQ14	PQ15	PQ16
LO: Learning Objectives PQ: Program Qualifications																
Contribution Level:	**1 very low**			**2 low**			**3 Medium**			**4 High**			**5 Very High**			