

## BASIC CHEMISTRY II

1	Course Title:	BASIC CHEMISTRY II
2	Course Code:	BES1012
3	Type of Course:	Compulsory
4	Level of Course:	First Cycle
5	Year of Study:	1
6	Semester:	2
7	ECTS Credits Allocated:	4.00
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:	
15	Course Lecturers:	
16	Contact information of the Course Coordinator:	msaksoy@uludag.edu.tr Tel: 0 (224) 2941740 Uludağ Üniversitesi Fen-Edebiyat Fakültesi Kimya Bölümü, 16059, BURSA
17	Website:	
18	Objective of the Course:	The purpose of this course is to teach the electronic structure of atoms, some atomic properties, chemical bonding of molecules, molecular geometry, properties of liquids and solids, intermolecular interactions, the physical properties of solutions, chemical equilibrium, and acid-base reactions
19	Contribution of the Course to Professional Development:	With this course, the student gains some important concepts in the field of chemistry that are necessary for his professional development.
20	Learning Outcomes:	
	1	Learn the concept of orbital and the electron configuration of the atom.
	2	Learns the concepts of atomic radius, ionization energy and electron affinity.
	3	Learns the concepts of Together with the theory of chemical bonding find Lewis symbol and geometry of molecules, polar and non-polar molecules.
	4	Learns the concepts of liquid properties (surface tension, viscosity, vapor pressure), melting point, boiling point, phase diagrams, intermolecular interactions, hydrogen bonding.
	5	Learns the concepts the type and concentration of the solution, the solubility of gases, vapor pressure and the osmotic pressure of the solution, the solution to the freezing point depression and boiling point elevation.
	6	Learns the concepts equilibrium conditions, the equilibrium constant and equilibrium calculations.
	7	Learns the concepts modern acid-base theories, factors affecting the strength of acids and bases, pH scale.
	8	Learns the concepts ion concentration of weak acids and bases in aqueous solution to be calculated.

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21	Course Content:			
	Course Content:			
Week	Theoretical		Practice	
1	Electronic Structure of Atoms			
2	Electronic Structure of Atoms			
3	Periyodik Çizelge ve Bazı Atom özellikleri			
4	Periodic table and some atomic properties			
5	Chemical Bonding I			
6	Chemical Bonding I (cont.)			
7	Liquids, Solids and Intermolecular Forces			
8	Liquids, Solids and Intermolecular Forces			
9	MIDTERM			
10	Solutions and Physical Properties			
11	Solutions and Physical Properties (cont.)			
12	Chemical Equilibrium			
13	Acids and Bases			
14	Acids and Bases (cont.)			
Activites			Number	Duration (hour)
				Total Work Load (hour)
23	Theoretical Assessment		14	2.00
Practicals/Labs			14	2.00
Self study and preperation			14	2.00
Midterm Exam			1	16.00
Homeworks			0	0.00
Projects			0	0.00
Home work project			0	0.00
Field Studies			0	0.00
Final Exam			1	16.00
Midterm exams			1	16.00
Total			2	16.00
Others			0	0.00
Contribution of Term (Year) Learning Activities to Success Grade			1	20.00
Total Work Load				120.00
Total work load/ 30 hr				4.00
Total			100.00	
ECTS Credit of the Course				4.00
Measurement and Evaluation Techniques Used in the Course			Measurement and evaluation are carried out according to the principles of Bursa Uludağ University Associate and Undergraduate Education Regulation.	
24	ECTS / WORK LOAD TABLE			

<b>25</b>	<b>CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS</b>															
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	PQ11	PQ12	PQ13	PQ14	PQ15	PQ16
ÖK1	3	1	3	4	1	3	5	1	3	4	4	5	3	3	4	2
ÖK2	3	1	3	4	1	4	3	1	3	4	3	4	3	3	4	2
ÖK3	5	1	3	5	1	4	4	1	3	4	4	4	3	2	4	3

ÖK4	3	1	3	4	1	5	5	1	3	4	4	4	3	2	3	3
ÖK5	4	1	3	5	1	5	5	1	3	4	4	4	2	2	3	4
ÖK6	4	3	3	5	1	4	4	1	3	4	5	5	3	3	2	3
ÖK7	4	2	3	5	1	3	5	1	3	4	5	5	4	4	3	3
ÖK8	3	1	3	4	1	3	4	1	3	4	4	5	2	3	3	4
LO: Learning Objectives    PQ: Program Qualifications																
Contribution Level:	1 very low			2 low			3 Medium			4 High			5 Very High			