



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Chemistry I							
Course Code		FBÖ153		Course Level		First Cycle (Bachelor's Degree)			
ECTS Credit	3	Workload	75 (Hours)	Theory	2	Practice	2	Laboratory	0
Objectives of the Course		At the end of this course, students will know about physical measurements, atomic theory and atomic structure, chemical substances and their formulas and names, equation of the chemical reactions, calculations with chemical formulas and equations, chemical reactions, gas laws, thermochemistry, quantum theory of atoms, electron configurations and periodicity, ionic and covalent bonding, molecular geometry and chemical bonding theory and states of matter (liquids and solids).							
Course Content		The structural and physical properties of matter, i.e., electronic structure of atoms, chemical binding, molecular geometry, hybridization and molecular orbitals and the states of matter, i.e., gases, liquids and solids.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Discussion, Project Based Study, Individual Study					
Name of Lecturer(s)									

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading

1	[1] Petrucci, R. H., Harwood, W.S. ve Geoffrey Herring, F. 2002; Genel Kimya, İlkeler ve Modern Uygulamalar, Çev. Ed. Tahsin Uyar ve Serpil Aksoy, Palme yayıncılık, Ankara 2) Mortimer, C. E. 1993; Modern Üniversite Kimyası, Çağlayan Basımevi, İstanbul 3) Atkins, P. ve Jones, L. 1998; Temel Kimya, Bilim Yayıncılık, Ankara
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Week	Weekly Detailed Course Contents	
1	Theoretical	1) Properties of matter and measurement (classification of matter)
2	Theoretical	2) Properties of matter and measurement (Separation methods, Chemical laws)
3	Theoretical	3) Gas Laws
4	Theoretical	4) Chemical reactions and calculations (Chemical reaction types)
5	Theoretical	5) Solutions
6	Theoretical	6) Solutions (Colligative properties)
7	Theoretical	7) Atomic structure and atomic models
8	Intermediate Exam	8) MidTerm
9	Theoretical	9) Periodic table (features of elements and finding)
10	Theoretical	10) Periodic table (periodic change of properties)
11	Theoretical	11) Chemical Bonding
12	Theoretical	12) Molecular Shape and Polarity
13	Theoretical	13) Inter-particle forces
14	Theoretical	14) Molecular geometry and hybridization (VSEPR Theory)
15	Theoretical	15) Hybrid orbitals and bonding
16	Final Exam	16) Final

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	1	2	42
Individual Work	12	0	1	12
Midterm Examination	1	9	1	10



Final Examination	1	10	1	11
Total Workload (Hours)				75
[Total Workload (Hours) / 25*] = ECTS				3
*25 hour workload is accepted as 1 ECTS				

Learning Outcomes

1	1) Explains the meaning and importance of chemistry in our lives.
2	2) Demonstrates the knowledge of chemical symbols and formulas and balances chemical equations.
3	3) Predicts the physical and chemical properties of the elements by using the periodic table.
4	4) Determines the mass corresponding to a given number of moles of a substance.
5	5) Applies the concept of limiting reagent in chemical reactions
6	6) Learns the basic information needed to run the laboratory.
7	7) Design experiments; performs, analyzes, interprets data, and associates the data with theoretical knowledge.
8	8) Recognizes methods and materials used in the chemical laboratory.

Programme Outcomes (Science Teacher Education)

1	To be able to gain subject knowledge of profession in theory and practice in the learning process.
2	To be able to gain the competence of using the appropriate approach, strategy, method and technique for the instructional plans to be prepared in the learning process.
3	To be able to gain the skills of the teaching profession in the learning process.
4	To be able to implement teaching profession knowledge, skills, attitudes and habits related to the subject-matter in a real teaching and learning environment in the learning process.
5	To be able to comprehend contemporary approaches of education and the philosophy they are based on.
6	To be able to gain the basic skills such as comprehending, expressing, commenting, evaluating, being aware and enterprising, communicating, acknowledging the individual related to the subject-matter.
7	To be able to become individuals faithful to the Principles and Revolutions of Atatürk, be modern democratic, secular, protecting and developing one's country, being alive to the nation, respecting human rights, preserving the nature, not being discriminatory, giving importance to the traditions and customs, protecting the values
8	To be able to improve oneself in terms of sport, art and culture.
9	To be able to become individuals believing in lifelong learning.
10	To be able to gain the vision of being individuals who keep up with developments in social, economic, technological and scientific areas, who investigate the main reasons of World problems and try to contribute to the solutions of these problems.

Contribution of Learning Outcomes to Programme Outcomes 1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High

	L1	L2	L3	L4	L5	L6	L7	L8
P1	5	5	5	5	5	5	5	5
P2	4	4	4	4	4	4	5	4
P3	5	4	4	4	4	4	4	4
P4	5	4	4	4	5	5	4	4
P5	5	5	3	4		5	4	4
P6	5	4	5	5	4	4	5	5
P7	4	4	5	5	4	4	5	5
P8	4	5	5	5		4	5	5
P9	3	4	4	4	5	4	5	5
P10	5	5	5			5	4	4

