



HASAN KALYONCU UNIVERSITY
Faculty of Engineering
Course Description Form

COURSE: General Chemistry					
CODE: CHEM101		SEMESTER: FALL			
LANGUAGE: ENGLISH		TYPE: COMPULSORY			
PRE-REQUISITES: - CO-REQUISITES: -		THEORY	PRACTICAL	CREDIT	ECTS
WEEKLY HOURS: 4		4	0	4	6

CONTENT OF THE COURSE:

This is an introduction course to Civil Engineering profession that provides students with primary principles and fundamental concepts of Civil Engineering discipline. This course includes some general introductory information on major specialty areas of Civil Engineering, historical perspectives, current status, and future challenges of the discipline and an introduction to the profession and its applications.

OBJECTIVE OF THE COURSE:

The objective of the course is to provide knowledge on the basic concept of the chemistry, atomic structure, periodic system, chemical bonds, gases and kinetic theory, solids, liquids.

WEEKLY SCHEDULE AND PRE-STUDY PAGES

Week	Topics
1	Introduction; matter and measurement
2	Atoms, molecules and ions
3	Atoms, molecules and ions
4	Stoichiometry; calculation with chemical formulas and equations
5	Aqueous reactions and solution stoichiometry
6	The periodic Table, and properties
7	The basic concept of bonding
8	Mid Term Exam
9	Gases
10	Intermolecular forces; Liquids and solids
11	Intermolecular forces; Liquids and solids
12	Chemical Equilibrium
13	Properties of solutions
14	Thermochemistry

- **TEXTBOOK:** Theodore L. Brown; H. Eugene LeMay Jr. Reno; Bruce E. Bursten; Catherine J. Murphy; Patrick Woodward; Chemistry: The Central Science; 11th Edition, Pearson Education, Inc. 2009

REFERENCE BOOKS

- Petrucci R.H. and Harwood W.S. General Chemistry: Principles and Modern Applications. 7th Edition Prentice Hall, 1997

LO2	3	3	0	0	0	0	0	0	0	0	0
LO3	3	3	0	0	0	0	0	0	0	0	0
PO: Program Outcomes LO: Learning Outcomes Values: 0: None 1: Low 2: Medium 3: High											

INSTRUCTOR(S):	Prof. Dr. Hüseyin BOZKURT
FORM PREPARATION DATE:	22.05.2019

LEARNING OUTCOMES OF THE COURSE:	PROGRAM OUTCOMES:
<p>LO1: Getting sufficient knowledge of mathematics, science and engineering discipline</p> <p>LO2: To provide knowledge on the basic concept of chemistry, chemical compounds and reaction.</p> <p>LO3: To provide knowledge on the liquids, solids and gases</p>	<p>PO1: Adequate knowledge in mathematics, science and engineering subjects pertaining to the relevant discipline; ability to use theoretical and applied knowledge in these areas in complex engineering problems.</p> <p>PO2: Ability to identify, formulate, and solve complex engineering problems; ability to select and apply proper analysis and modeling methods for this purpose.</p> <p>PO3: Ability to design a complex system, process, device or product under realistic constraints and conditions, in such a way as to meet the desired result; ability to apply modern design methods for this purpose.</p> <p>PO4: Ability to devise, select, and use modern techniques and tools needed for analyzing and solving complex problems encountered in engineering practice; ability to employ information technologies effectively.</p> <p>PO5: Ability to design and conduct experiments, gather data, analyze and interpret results for investigating complex engineering problems or discipline specific research questions.</p> <p>PO6: Ability to work efficiently in intra-disciplinary and multi-disciplinary teams; ability to work individually.</p> <p>PO7: Ability to communicate effectively in Turkish, both orally and in writing; knowledge of a minimum of one foreign language; ability to write effective reports and comprehend written reports, prepare design and production reports, make effective presentations, and give and receive clear and intelligible instructions.</p> <p>PO8: Recognition of the need for lifelong learning; ability to access information, to follow developments in science and technology, and to continue to educate him/herself.</p> <p>PO9: Consciousness to behave according to ethical principles and professional and ethical responsibility; knowledge on standards used in engineering practice.</p> <p>PO10: Knowledge about business life practices such as project management, risk management, and change management; awareness in entrepreneurship, innovation; knowledge about sustainable development.</p>

	<p>PO11: Knowledge about the global and social effects of engineering practices on health, environment, and safety, and contemporary issues of the century reflected into the field of engineering; awareness of the legal consequences of engineering solutions.</p>
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