NEAR EAST UNIVERSITY – COMMON COURSES COORDINATION UNIT

Ders Bilgi Formu / Course Information Sheet

Ders Kodu / Course Code	**Ders Adı / Course Name**	**Kredi /Credit**	**AKTS /ECTS**
CHM122	Organic Chemistry	3	5

Önkoşul / Pre-requisite: CHM101/CHM104

Ders Dili / Language:	**Ders Türü /Course Type:**	**Öğretim Ortamı / Mode of Instruction:**
English	Compulsory	Distant

Haftalık Ders Saati / Weekly Hours	**Sınıf Saati / Class Hours**	**Laboratuvar / Laboratory**	**Uygulama / Practicum**	**Öğrenim Oturumları / Learning Sessions**			
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Öğrenim Çıktıları / Learning Outcomes	Bu dersin sonunda öğrenciler: After the completion of this course, the student will be able to: ► Predict physical and chemical properties of organic compounds based on chemical bonding, geometry and intermolecular interactions. ► Learn basic concepts of electronic structure and be able to apply them to solve problems from various areas of organic chemistry, including stereochemistry, reactivity patterns and synthesis. ► Identify and apply recent knowledge, and analyse and solve problems in the life sciences, and understand the relationship between the life sciences, chemistry and engineering. ► Succeed in qualitative and quantitative problem solving skills. ► Recognize the need for lifelong learning.
Ders Tanımı / Course Description	This course is designed as a one-semester course for materials science and nanotechnology engineering, bioengineering, food engineering and molecular biology and genetics students. CHM 122 is a central link between physical and biological sciences and introduces a fundamental basis in nanotechnology, food processing, genetics and tissue engineering.
Dersin Amaçları / Course Objectives	Students who successfully complete this course will be able to: 1. Understand and realize the integration of organic chemistry in life sciences and engineering. 2. Develop an understanding and appreciation of both structure and chemical transformations of organic molecules. 3. Function effectively in a medically and biologically oriented problem-solving environment. 4. Develop scientific inquiry, complexity, critical thinking, mathematical and quantitative reasoning.
Kullanılan Materyaller / Textbooks and/or References	1 Solomons, T. W. G., Fryhle, C. B., Snyder, S. A., ORGANIC CHEMISTRY, 11E, Wiley 2014 2
Ders İçeriği / Course Content	This course provides a broad perspective about carbon compounds, chemical bonds, molecular structure, intermolecular interactions, organic reactions and mechanisms, acids and bases, alkanes and cycloalkanes, conformational analysis, stereochemistry: chiral molecules, substitution and elimination reactions of alkyl halides, alkenes and alkynes (addition reactions), alcohols and ethers, aromatic compounds and reactions, aldehydes and ketones, carboxylic acids and amines.