

## NEAR EAST UNIVERSITY – COMMON COURSES COORDINATION UNIT



Ders Bilgi Formu / Course Information Sheet

<b>Ders Kodu / Course Code</b> CHM104	<b>Ders Adı / Course Name</b> General Chemistry for Biological Sciences and Engineering	<b>Kredi /Credit</b> 4	<b>AKTS /ECTS</b> 5				
<b>Önkoşul / Pre-requisite: None</b>							
<b>Ders Dili / Language:</b> English		<b>Ders Türü /Course Type:</b> Compulsory		<b>Öğretim Ortamı / Mode of Instruction:</b> Face to face			
<b>Haftalık Ders Saati / Weekly Hours</b>	<b>Sınıf Saati / Class Hours</b>	<b>Laboratuva r / Laboratory</b>	<b>Uygulama / Practicum</b>	<b>Öğretim Oturumları / Learning Sessions</b>			
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<b>Öğrenim Çıktıları / Learning Outcomes</b>		<p>Bu dersin sonunda öğrenciler: After the completion of this course, the student will be able to:</p> <ul style="list-style-type: none"> <li>▶ Predict physical and chemical properties of compounds based on chemical bonding, geometry and intermolecular interactions.</li> <li>▶ Predict the outcome of reactions, including those involving acids and bases and their applications</li> <li>▶ 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.</li> <li>▶ Succeed in qualitative and quantitative problem solving skills.</li> <li>▶ Recognize the need for lifelong learning.</li> </ul>					
<b>Ders Tanımı / Course Description</b>		This course is designed as a one-semester course for freshman molecular biology and genetics, food, biomedical and bioengineering students.					
<b>Dersin Amaçları / Course Objectives</b>		<p>Students who successfully complete this course will be able to:</p> <ol style="list-style-type: none"> <li>1. Understand and realize the integration of chemistry in life sciences and engineering.</li> <li>2. Function effectively in a medically and biologically oriented problem-solving environment.</li> <li>3. Develop scientific inquiry, complexity, critical thinking, mathematical and quantitative reasoning.</li> <li>4. Formulate meaningful conclusions according to scientific inquiry by collecting, analyzing, summarizing and interpreting laboratory data.</li> </ol>					
<b>Kullanılan Materyaller / Textbooks and/or References</b>		<ol style="list-style-type: none"> <li>1   Chemistry Principles and Reactions (7th edition, 2012) by William L. Masterton and Cecile N. Hurley, Brooks/Cole Cengage Learning</li> <li>2   CHM104 Lab Manual</li> </ol>					
<b>Ders İçeriği / Course Content</b>		Matter and measurement; atoms, molecules and ions; mass relations in chemistry; electronic structure and the periodic table; covalent bonding; molecular bonding and structure, acids and bases, equilibria in acid-base solutions, organic compounds.					