



Sub.	Course Description – توصيف مقرر دراسي	الموضوع	 كليات المعرفة ALMAAREFA COLLEGES
Date	12/02/2015	التاريخ	

Course Code & No	CHEM -101		رقم المقرر ورمزه
Course Name	Introduction to Chemistry –I01		اسم المقرر
Credit Hours	4(3 + 1 + 0)		عدد الساعات المعتمدة
Pre-requisite	None	لا يوجد	المتطلب السابق

General Description	توصيف عام
<p>1) This course is a comprehensive introduction in all aspects of general and organic chemistry, of freshmen students. This course will qualify the students and prepare them with chemistry knowledge to further their studies.</p> <p>2) This course covers the fundamental of practical chemistry in many chemical departments such as: qualitative analysis, quantitative analysis, Volumetric analysis and Organic chemistry.</p>	

Course Objectives	أهداف المقرر
<p>.a) The ability to understand chemical reactions and chemicals equations.</p> <p>.b) The ability to clearly understand electronic and atomic structure of elements.</p> <p>c) The ability to clearly understand physical properties of solutions.</p> <p>d) The ability to understand chemical kinetics.</p> <p>e) The ability to comprehend principles of organic chemistry such as structures, nomenclature, classification and stereochemistry.</p> <p>f) The ability to quantitative analysis inorganic salt through identification of acid and basic radicals.</p> <p>g) The ability to understand chemical key concept from the experiment process and develop scientific thinking.</p> <p>h) The ability to write a clear lab report in terms of discover unknown substance.</p> <p>i) The ability to develop their mathematical skill by solving quantity problems in general chemistry.</p> <p>j) The ability to work in team.</p> <p>k) Work in chemistry lab may rise a Self-confidence and (a promptitude for chemistry students.</p>	

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Course Outlines	مفردات المقرر
.1) Laws of chemical combinations 2) Molecular mass and formula mass .3) Chemical reactions and chemical equation, the mole concept. 4) Theoretical yield and percentage yield. 5) Periodic table and some properties of the elements. 6) Chemical reactions in aqueous solution. 7) Electronic, atomic structure of elements. 8) Chemical bonding, general concepts. 9) Chemical reaction and the periodic table. 10) Physical properties of Solution. 11) Acid- Base equilibria in aqueous solutions. 12) Identification of Anions (Acid radicals). 13) Identification of Cations (Basic radicals) 14) Solubility product principle 15) Flame test for Cations. 16) Introduction to principles of Organic chemistry. 17) Nomenclature, Classification, Preparation and reactions of various chemicals functional groups. 18) Stereochemistry and Chirality. 19) Aromaticity, Benzene and Substituted Benzenes 20) Identification of Anions & Cations. Acid – Base Titration .Organic Chemistry to determine the difference between some organic compounds in terms of their bonds order and determined some of functional groups.	

References	المراجع
1) James F Brady. General Chemistry, Principle and Structure, Latest Edition, John Wiley & Sons, New York. 2) Ralph J. Fessenden. Organic Chemistry, Latest Edition. Brooks/Cole Publishing Company California.	