



Code	CBQ207	Prerequisites	CBM102
Name	Chemistry I	Co-requisites	CBQ207L

Credits	Contact Hours
04	44
Categorization of credits	
Math and basic science	X
Engineering topic	
Other	

Coordinator's name	Carmen Sánchez
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Text book
Other supplemental materials
<p>Brown, T., Lemay H., Burnsten, B (2009) Chemistry The Central Science 11th Edition. Pearson Education. Mexico.</p> <p>Chang R. (2010) Chemistry. 10th Edition. McGraw Hill Publisher. Mexico.</p> <p>Mendoza, L. (2001) Manual de Laboratorio de Química. República Dominicana INTEC.</p> <p>Quezada, R. (2014). Química General. Guía de ejercicios y problemas. Volumen I. República Dominicana INTEC.</p> <p>Whitten K, Davis R, Peck M, Stanley G. (2014) Chemistry. 10th Editorial Cengage Learning. Mexico</p>

Description	
<p>In this subject students use the basic language of chemistry, know the units of the International System of Measurements. Identify the chemical and physical properties and changes of matter. Build atomic models. Distinguish the differences between the different chemical bonds. Know the nomenclature of inorganic compounds.</p> <p>Write a chemical equation to describe the result of a chemical reaction. Use terminology of solutions and calculate the concentration. Distinguish the states of matter and fundamental properties and finally analyze the structure and composition of the atmosphere and some of the chemical substances that take place there. The topics to be developed in the program are: Science and measurements, the structure of the atom, chemical bonding, fundamental laws of chemistry, chemical reactions and equations, properties of solutions, states of matter and chemistry of the atmosphere.</p>	
Type of course	<input checked="" type="checkbox"/> Required

	<input type="checkbox"/> Elective
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Specific goals for the course	
Outcomes of instruction	<p>EG1. Show interest in scientific research, seeking information in various contexts to understand changes in matter.</p> <p>EG2. Assess the link between science and technology by accessing web pages related to the subject to associate chemical concepts with daily life.</p> <p>EG3. Assume a supportive, cooperative, leadership and responsible role during group activities to make the level of learning obtained more efficiently.</p> <p>EG4. Demonstrate thoughtful attitude towards the risks and benefits of chemistry for its efficient application in order to protect health and the environment.</p> <p>EG5. Explain the interrelation between Chemistry with other sciences, industry and the environment to relate it to everyday life.</p> <p>EG6. Use laboratory equipment with a high level of skill and responsibility to acquire skill in the use of experimental techniques in order to verify experiments.</p>
Student outcomes	<p>CG1. Identify, formulate, and solve complex engineering problems by applying the principles of engineering, science, and mathematics.</p> <p>CG2. Work effectively in teams whose members collectively provide leadership, create a collaborative and inclusive environment, set goals, plan tasks, and meet objectives.</p>

Topics
Unit I. Science and measurements Unit II. Atom structure Unit III. Chemical bond Unit IV. Fundamental laws of Chemistry Unit V. Reactions and Chemical Equations Unit VI. Solution Properties Unit VII. States of the material Unit VIII. The Chemistry of the Atmosphere