



Code	CBQ208L	Prerequisites	CBQ207 CBQ207L
Name	Chemistry Laboratory II	Co-requisites	

Credits	Contact Hours
01	10
Categorization of credits	
Math and basic science	X
Engineering topic	
Other	

Coordinator's name	Carmen Sánchez Carmen Hernández
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Text book
Other supplemental materials
Mendoza, L. (2013) Manual de Laboratorio de Química. República Dominicana INTEC.
Chang R. (2010) Chemistry. 10th Edition. McGraw Hill Publisher. Mexico.
Whitten K, Davis R, Peck M, Stanley G. (2014) Chemistry. 10th Editorial Cengage Learning. Mexico
Quezada, R. (2014). Química General. Guía de ejercicios y problemas. Volumen I. República Dominicana INTEC.
Whitten K, Davis R, Peck M, Stanley G. (2014) Chemistry. 10th Editorial Cengage Learning. Mexico

Description
The Chemistry laboratory provides engineering students with a set of knowledge to experimentally verify the contents of the theory of the subject. The practices are designed so that the student can become familiar with the equipment, reagents and materials of common use in the laboratories and develop abilities and skills in handling them, assuming a collaborative work with an analytical criterion and not only with the curiosity of check phenomena.

In this laboratory the following practices will be developed: Solutions and solubilities, Acid-base titration, Reaction rate, Equilibrium constant, Hard and soft water, pH and buffer solutions, heat of reaction, Oxidation-reduction; oxidation numbers and redox reactions.

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 efficient.</p> <p>EG4. Demonstrate a 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 skills in the use of experimental techniques in order to verify experiments.</p>
Student outcomes	<p>CG1. Identify, formulates, and solves 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. Solutions and solubility Unit II. Acid base titration Unit III. Speed in reaction Unit IV. Equilibrium constant Unit V. Hard and soft water Unit VI. PH determination Unit VII. heat of reaction

Unit VIII. Oxidation reduction. oxidation number
Unit IX. Redox reactions