



UNIVERSIDAD DE GUADALAJARA

Centro Universitario de Ciencias Exactas e Ingenierías
Secretaría Académica / Coordinación de la Licenciatura en Química
Comité de Innovación Curricular de la Licenciatura en Química

1.- GENERAL INFORMATION

Learning Unit Organic Chemistry Lab I		Department Chemistry		Format Lab
Prerequisites(P) General Chemistry I	Corequisites (CO) Organic Chemistry Theory I	Ascribed Academy Academy of Organic Chemistry	Module M1: Structure of Matter	
Type Basic Particular Mandatory	Lecture hours 0 hours	Practice hours 51 hrs.	Total hours 51 hrs.	Credits 9

2.- GENERIC COMPETENCIES

Students ...

...apply security regulations when handling lab material and reagents, as well as treating residues in the organic chemistry lab.

... search and interpret bibliographic information.

... know how to choose and use the appropriate material.

...learn the usual separation methods in organic chemistry.

...perform the basic set ups.

...develop skills such as the ability to write concisely and in an organized way.

3.- SPECIFIC CHARACTERISTICS OF THE COMPETENCY

Knowledge	Students become acquainted with organic chemistry methods carried out with basic lab material to handle different experimental techniques.
Skills	Students develop abilities... to analyze to organize and plan. to search for information in different sources and analyze it. to solve problems. to make decisions to communicate in writing and orally. to work autonomously.
Aptitudes	Critical and self-critical abilities Team work Interpersonal skills Ethical commitment Ability to apply knowledge in a practical way. Search skills



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	Learning abilities Ability to adapt themselves to new situations Creativity Leadership Ability to work independently Initiative and entrepreneurship
Values	Leadership Ethics Responsibility Tolerance.

4.- TRANSVERSAL COMPETENCIES

<input checked="" type="checkbox"/>	Foreign Language (English)
<input checked="" type="checkbox"/>	Critical, analytical and synthetic thinking.
<input checked="" type="checkbox"/>	Oral and written expression
<input checked="" type="checkbox"/>	Professional ethics
<input type="checkbox"/>	Administration of human and material resources
<input checked="" type="checkbox"/>	Leadership and sustainability
<input type="checkbox"/>	Creativity, innovation and entrepreneurship Other

5.- COURSE CONTENT OF THE LEARNING UNIT

1. Introduction to the subject
2. Lab material
3. Experimental lab techniques
4. Basic lab techniques



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6.- ASSESSMENT

<input checked="" type="checkbox"/>	Numeric grade
<input type="checkbox"/>	
<input type="checkbox"/>	

7.- GRADING CRITERIA OF THE LEARNING UNIT

Indicator of evaluation	Percentage
Departmental exams	0
Partial exam	0
Homework	0
Research activities	0
Practice reports	40
Class participation	30
Other: Logbook	30

8.- REQUIRED MATERIAL (for students)

<input checked="" type="checkbox"/>	Calculator
<input checked="" type="checkbox"/>	Periodic table
<input checked="" type="checkbox"/>	Lab coat
<input type="checkbox"/>	Text book
<input checked="" type="checkbox"/>	Workbook
<input type="checkbox"/>	



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9.-SPECIFIC CONTENT BY LEARNING UNITS

Content unit	Generic competency of the content unit	Topics	Class hours	Student activities	Bibliography
1. Introduction	Students -recognize the lab safety measures and the toxicity of organic substances. -Use a notebook or an experimental work logbook and lab material.	1.1 Lab safety rules and toxicity of organic substances. 1.2 Notebook, experimental work logbook. 1.3 Lab material	6	Students take notes of the experimental procedures in the logbook, carry out the experimental part instructed by the teacher and write a report in teams about their findings.	Drust Dipond, Gokel George, (1985) <i>Química Orgánica Experimental.</i> , Reverté, S.A. Brewster Ray Q., Vanderwerf Calvin A., McEwen William E., (1978) <i>Curso Práctico de Química Orgánica</i> , Alhambra.
2. Experimental techniques	Students understand and handle the physical properties of the organic compounds in order to identify them	2.1 Performance calculations 2.2 Chemical bibliography 2.3 Fusion point 2.4 Boiling point 2.5 Refraction index 2.6 Polarimetry	9		
3. Basic lab techniques.	Students understand and handle the way to separate, isolate and purify organic substances.	3.1 Distillation 3.2 Sublimation 3.3 Crystallization 3.4 Chromatography 3.5 Heating methods 3.6 Use of the rotary vapor. 3.7 Extraction and drying of organic liquids. 3.8 Elimination of hazardous gases.	39		



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<div>COURSE EVIDENCE (Deliverables)</div> <div>Practice reports binder in teams. Procedure logbook Any other evidence proposed by the professor.</div>					

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