



Course specification

University/Academy: Damahour University

Faculty/Institute: Science

Department: Chemistry

1. course Data:		
Course code: Chem. 422	Course title: Organic Chemistry 3	Academic year/level: 2010-2011 fourth year / 2 nd term
Specialization: chem..phys.,chem..botany, chem..zoology, chem..bio& chem.. micro	No. of instructional units: lecture <input type="text" value="3hrs/week"/> tutorial <input type="text" value="5hrs/week"/> practical <input type="text" value="5hrs/week"/>	

2. course Aim	<p>By the end of this course, students should be able to:</p> <ul style="list-style-type: none">• Illustrate the principles of natural products (Terpenes, steroids, alkaloids. Amino acids, lipids, nucleic acids).• Identify Chemotherapy: Introduction, selected examples from sulfonamides, antimalarials, and antibiotics.• Discuss the Petroleum chemistry. Hydrocarbon and non-hydrocarbon constituents of crude oils. Refining of petroleum. Thermal and catalytic cracking and reforming. Up-grading octane number. Petrochemical processes of industrial interest.• Report the Color, chemical structure,
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	Nomenclature, Classification and Synthesis of different types of dyes.
3. Intended learning outcome	
a) Knowledge and understanding	By the end of this course, students should be able to: A1: identify the chemistry of natural products. A2: describe the chemotherapy and select examples of sulfonamides, antimalarials, and antibiotics. A3: list the principles of petroleum chemistry. A4: formulate the types, properties and actions of Dyes.
b) Intellectual skills	By the end of this course, students should be able to: B1: planning the chemistry of some natural products (as Terpenes, steroids, alkaloids. Amino acids, lipids, nucleic acids). B2: discuss the action of sulfonamides, antimalarials, and antibiotics. B3: Discuss the principles of petroleum chemistry B4: Discuss the applications of Dyes.
c) Professional skills	By the end of the course, student will be able to:



	<p>C1: examine Simple organic compounds.</p> <p>C2: prepare some quantitative organic analysis.</p> <p>C3: examine Applications for Drugs, Dyes</p>
<p>d) General skills</p>	<p>D1: Use IT and web search engines for collecting information.</p> <p>D2: Work effectively in a team, and independently on solving organic chemistry problems.</p> <p>D3: examine ideas, principles and information by oral, written and visual means.</p> <p>D4: Communicate effectively with his lecturer and colleagues</p>
<p>4. course content</p>	<p>Chemistry of natural products: Terpenes, steroids, alkaloids. Amino acids, lipids, nucleic acids.</p> <p>Chemotherapy:</p> <p>Introduction, selected examples from sulfonamides, antimalarials, antibiotics.</p> <p>Petroleum Chemistry:</p> <p>Hydrocarbon and non-hydrocarbon constituents of crude oils. Refining of petroleum. Thermal and catalytic cracking and reforming. Up-grading octane number. Petrochemical processes of industrial interest.</p> <p>Dyes:</p> <p>Color and chemical structure. Nomenclature.</p>



	Classification. Synthesis of different types of dyes. Pigments.
5. Teaching and learning methods	5.1. Lectures and seminars using data show and board. 5.2. Laboratory work and assignment. 5.3. Problem classes and group tutorial. 5.4. Reports and discussion groups
6. teaching and learning methods for students with special needs	-----
7. Student Assessment	7.1. Mid term exam. 7.2. Practical exam. 7.3. Problems. 7.4. Assignments. 7.5 Written exam.
a) Procedures used:	-----
b) Schedule:	Assessment 1: Practical Assessment 2: Mid term Assessment 3: Final practical Assessment 4: Final written Week: 1
c) Weighing of Assessment:	Mid-Term Examination: 15



	Final-Term Examination: 150 Practical Examination: 25 Semester Work: 10 Other types of assessment 0 Total 200
8. List of Textbooks and References:	8.1. Course Notes 8.2. Essential Books (Text Books). <ul style="list-style-type: none">• Organic Chemistry, 4 th Eddition by Robert Wlorrison and Robert Boyd, Allyn and Bacon, Ir.c., Boston, London, Sydney, Toronto, 1983.• Organic Chemistry, 6 th Eddition by I. L. Finar, Longmann Group Limited, volume I and II 1975.• Fundamentals of Organic chemistry, 5 th Edition by Solomon, 1991.• Petroleum chemistry , 3th Edition by M.M.El Aimary, center of petroleum researchs.1990.• Herper's illustrated Biochemistry,27 th Edition by Murray, Granner and Rodwell, 2006.



	8.3 Recommended books. 8.4 Periodical and website
a) Course Notes	-----
b) Required Books (Textbooks)	-----
c) Recommended Books	-----
d) Periodicals, web sites,....,etc	-----

Course Instructor:

Head of Department: Dr. Medhat A. Shaker

1- Prof.Dr Adel Zaki Nasr

2- Dr.Mohamed Abd Ellatif Zein

Date: -----/-----/-----