



Course specification

University/Academy: Alexandria

Faculty/Institute: Science

Department: Chemistry

1. course Data:		
Course code: chem. 351	Course title: Organic Chemistry 3	Academic year/level: 2009-2010 Third year /1 st term
Specialization: Special zoology	No. of instructional units: lecture <input type="text" value="2hrs/wee"/> practical <input type="text" value="3 hrs/week"/>	

2. course Aim	By the end of this course, students should be able to: <ul style="list-style-type: none">• Realize the principles of Definition, nomenclature, Classification and chemistry of Carbohydrates.• Understand the chemistry of Amino acids, Piptides ,Lipids and nucleic acids.
3. Intended learning outcome	
a) Knowledge and understanding	By the end of this course, students should be able to: A1: define the chemistry of Monosaccharides (D- and L- family, ring structure, anomers, conformation, and reactions). Oligosaccharides. (maltose, lactose cellobiose, sucrose). Polysaccharides. (starch, chitin, peptidoglycans glycoproteins, lipopolysaccharides) A2 :list the principles of Chemistry of Amino Acids and Peptides. A3 describe the Application of Chemistry of lipids and nucleic acids.
b) Intellectual skills	By the end of this course, students should be able to: B1: evaluate the principles of Carbohydrates,



	<p>Amino acids, Lipids and nucleic acids.</p> <p>B2: capable for Preparation and identification of simple organic compounds</p>
c) Professional skills	<p>By the end of the course, student will be able to:</p> <p>C1: prepare Simple organics .</p> <p>C2: examine Carbohydrates, Amino acids, Lipids and nucleic acids.</p> <p>C2: Use the Application of Amino acids, Lipids and nucleic acids</p>
d) General skills	<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: question ideas, principles and information by oral, written and visual means.</p> <p>D4: Communicate effectively with his lecturer and colleagues</p>
4. course content	<p>Chemistry of Carbohydrates: Definition. Classification. Monosaccharides (D- and L- family, ring structure, anomers, conformation and reactions).</p> <p>Oligosaccharides. Polysaccharides</p> <p>Chemistry of Amino Acids and Peptides: Amino acids. Peptides. Physiologically active proteins.</p> <p>Chemistry of lipids: Classification. Fatty acids. Triglycerides. Phospholipids. Prostaglandins. Steroids.</p> <p>Chemistry of nucleic acids: Sugar components. Organic bases. Nucleosides. Nucleotides. Primary structure. Secondary structure.</p> <p>Chemistry of heredity. Replication of DNA</p>
5. Teaching and learning methods	<p>4.1. Lectures and seminars using data show and board.</p> <p>4.2. Laboratory work and assignment.</p> <p>4.3. Problem classes and group tutorial.</p>



	4.4. Reports and discussion groups												
6. teaching and learning methods for students with special needs	-----												
7. Student Assessment	5.1. Mid term exam. 5.2. Practical exam. 5.3. Problems. 5.4. Assignments. 5.5 Written exam.												
a) Procedures used:	-----												
b) Schedule:	Assessment 1: Practical Assessment 2: Mid term Assessment 3: Final practical Assessment 4: Final written Week: 16												
c) Weighing of Assessment:	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 70%;">Mid-Term Examination:</td> <td style="text-align: right;">15</td> </tr> <tr> <td>Final-Term Examination:</td> <td style="text-align: right;">100</td> </tr> <tr> <td>Practical Examination:</td> <td style="text-align: right;">25</td> </tr> <tr> <td>Semester Work:</td> <td style="text-align: right;">10</td> </tr> <tr> <td>Other types of assessment</td> <td style="text-align: right;">0</td> </tr> <tr> <td style="text-align: center;">Total</td> <td style="text-align: right;">150</td> </tr> </table>	Mid-Term Examination:	15	Final-Term Examination:	100	Practical Examination:	25	Semester Work:	10	Other types of assessment	0	Total	150
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Total	150												
8. List of Textbooks and References:	6.1. Course Notes 6.2. 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. 												



	<ul style="list-style-type: none">• Fundamentals of Organic chemistry, 5 th Edition by Solomon, 1991.• Herper's illustrated Biochemistry, 27 th Edition by Murray, Granner and Rodwell, 2006. <p>6.3 Recommended books. 6.4 Periodical and website</p>
a) Course Notes	-----
b) Required Books (Textbooks)	-----
c) Recommended Book	-----
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: -----/-----/-----