Course specification

University/Academy: Alexandria

Faculty/Institute: Science

Department: Chemistry

1. course Data:		
Course code: Chem. 322	Course title: Organic Chemistry 3	Academic year/level:2009/2010 Third year /2nd term
Specialization: Zoology and chemistry	No. of instructional units: lecture 2hrs/week tutorial 1hrs/week practical -	

2. course Aim	By the end of this course, students should be able to: • Understand the basic concepts of Heterocyclic compounds (classification, Preparation and reactions). • Recall the principles of polymerization. • Realize types, structure, properties of polymers. Realize the principles of Classification, Isomerization and chemistry of Carbohydrates (mono, oligo and polysaccharides)
3. Intended learning outcome	

a) Knowledge and understanding	By the end of this course, students should be able to: A1**:** define the chemistry of some Heterocyclic compounds. **A2:** illustrate the principles of polymerization. A3: show types, structure, properties of polymers.. A4: recognize the chemistry of carbohydrates.
b) Intellectual skills	By the end of this course, students should be able to: B1 : Discuss the different types of chemical calculations, the structures and preparation of Heterocyclic compounds. B2:used the polymers by physical tools. B3**:**Analyze the Application of carbohydrates
c) Professional skills	By the end of the course, student will be able to: C1: examine different types of chemical calculations, the structures and preparation of Heterocyclic compounds, polymers and carbohydrates
d) General skills	D1: IT and web search engines for

	collecting information. D2:Work effectively in a team, and independently on solving organic chemistry problems. D3:express ideas, principles and information by oral, written and visual means. D4:Communicate effectively with his lecturer and colleagues.
4. course content	**Heterocyclic Compounds:** Furan, pyrrole, and thiophene indole, pyridine, and quinoline, isoquinoline, isothiazole, and imidazole oxazole and thiazole. **Polymerization:** Chain reaction polymerization. Free radical, Ionic and Coordination polymerization. Step reaction polymerization, structure and properties of polymers. **Carbohydrates:** Mono, Oligo and polysaccharides
5. Teaching and learning methods	5.1. Lectures and seminars using data show and board. 5.2. Problem classes and group tutorial. 5.3. Reports and discussion groups

6. teaching and learning methods for students with special needs	----------
7. Student Assessment	7.1. Mid term exam. 7.2. Problems. 7.3. Assignments. 7.4 Written exam.
a) Procedures used:	----------
b) Schedule:	Assessment 1: Mid term Assessment 2: Final written
c) Weighing of Assessment:	Mid-Term Examination: 0 Final-Term Examination: 100 Semester Work: 0 Other types of assessment 0

	Total 100
8. List of Textbooks and References:	8.1. Course Notes 8.2. Essential Books (Text Books). • 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 I11975. • Herper's illustrated Biochemistry,27 th Edition by Murray,Granner and Rodwell,2006. • Fundamentals of Organic chemistry, 5 th Edition by Solomon, 1991. • Fundamentals of spectroscopic methods,2 th Edition ,1985. 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:

Shaker

1- Prof.Dr Adel Zaki Nasr

2- Dr.Mohamed Abd Ellatif Zein

Head of Department: Dr. Medhat A.

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