

## *Course specifications*

**Programme(s) on which the course is given:** M.Sc. chemistry

**Major or minor element of programmes:** Major

**Department offering the programme:** chemistry

**Department offering the course:** chemistry

**Academic year / Level:**

**Date of specification approval:** 2010

### **A- Basic Information**

**Title:** Carbohydrate **Code:** CH6513

**Credit Hours:** 2 **Lecture:** 2

**Tutorial:** - **Practical:** - **Total:** 2

**Teaching staff:** Prof. dr. / Hamed Abdel-bary

### **B- Professional Information**

#### **1 – Overall aims of course**

The students should be able to give an account on carbohydrates and understanding the basics concepts of different types of carbohydrates. Define the application of cellulose and starch.

#### **2 – Intended learning outcomes of course (ILOs)**

##### **c- Knowledge and understanding:**

a1- the students should be able to list monosaccharides, disaccharides, polysaccharides

a2- the students should be able to define Mutarotation & Epimerization.

a3- the students should be able to give structure of different carbohydrates.

#### **d- Intellectual skills**

b1- creation of the student's capability to understanding and drawing the structure of disaccharides ( Maltose, Lactose, ... ) and polysaccharides ( cellulose and starch ) and their reactions.

#### **e- Professional and practical skills**

c1-The students should be able to use lab. Experiments to differentiate between different types of saccharides and their Mutarotation and confirmation the structure of them.

#### **f- General and transferable skills**

D1-improvement of the students skills especially in thinking.

d2- Mutual discussion and oral presentation.

### **3- Contents**

| Topic  | No. of hours | Lecture | Tutorial/Practical |
|--|--------------|---------|--------------------|
| Definition and types of Glycosides   | 2            |         |                    |
| Biological activity and Importance of Glycosides                                 | 2            |         |                    |
| Preparation of acetohalosugars   | 2            |         |                    |
| Walden Inversion   | 2            |         |                    |
| Reactions of acetohalosugars with quinazolines and Thioquinazolines              | 2            |         |                    |
| Reactions of acetohalosugars with oxadiazoles and Thiadiazoles.                  | 2            |         |                    |
| Deprotection reactions of acetylated quinazolines, oxadiazoles and thiadiazoles. | 2            |         |                    |

### **4- Teaching and learning methods**

4.1- Lectures

## 5- Student assessment methods

5.1- oral to assess the understanding

5.2 - Mid term to assess the mid term performance

5.3 – Final term to assess the final term performance

### Assessment schedule

Assessment 1 oral week every two weeks

Assessment 2 mid-term week 7<sup>th</sup> weeks

Assessment 3 final-term week 14<sup>th</sup> weeks

### Weighting of assessments

Mid-Term Examination (written + practical) **20 %**

Final-term Examination (written + practical) **60 %**

Oral Examination. **20 %**

Semester Work (written + practical)

Other types of assessment

Total **100%**

Any formative only assessments

## 6- List of references

6.1- text book of organic chemistry ( Vogel )

## 7- Facilities required for teaching and learning

over head projectors

**Course coordinator: Prof. Dr/ Hamed Abdelbary**

**Head of Department: Prof. Dr/ Ahmed Abdelmegeied**

**Date: / /**