

## **COURSE SPECIFICATION of Medical Biochemistry for hepatology medicine**

### **A- Administrative Information**

**Course Title:** Medical Biochemistry

**Code:** HEPT712

**Department giving the course:** Medical Biochemistry Department

**Program on which the course is given:** Master degree in Hepatology  
Medicine

**Department offering the Program** Hepatology Medicine department

**Semester:** 1<sup>st</sup> part

**Date of specification/revision:**2011

**Date of approval by Departmental and Institute Council:**2011

### **(B) Professional information:**

#### **1 – Overall aims of course**

The two major concerns for workers in the health science – and particularly physicians – are the understanding and maintenance of health and the understanding and effective treatment of diseases. Biochemistry impacts enormously on both of these fundamental concerns of medicine.

In fact, the interrelationship of biochemistry and medicine is a wide two-ways street. Biochemistry studies have illuminated many aspects of health and disease, and conversely, the study of various aspects of health and disease has opened up new areas of biochemistry.

Shared science and its subjects must be chosen by the Biochemistry department

1. To help students to become familiar with the biochemical knowledge that will assist students in understanding biochemical alteration in health and disease.
2. To provide students with good knowledge about inborn error of carbohydrate, lipids, protein and heme metabolism.
3. To able the students to be oriented with concepts of genetic disease, hormones, immunoglobulin, acute phase reactant proteins, vitamins and minerals and how these fields gave us a new perspective and new technology used in the diagnosis,  
Treatment of hepatological diseases and new drugs design.

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

##### **f- Knowledge and Understanding:**

*By the end of the course, students should be able to:*

- a 1. identify the inborn error of CHO metabolism by its genetic defect.
- a 2. compare different types of lipoproteins disorders
- a 3. relate the metabolic disorders to its amino acid inborn errors ( melatonin and melanin)
- a 4. Describe the biochemical basis of prophyria.

### **B. Intellectual skills:**

*By the end of the course, students should be able to:*

- b1 Apply the etiology of endocrine disturbance in a given case study report.
- b2 Analyze the application of vitamins as antioxidants.
- b3 Suggest the possible investigations needed for diagnosis of minerals deficiency..
- b4 Point out the specific immunoglobulin related to different liver diseases.

### **C. Professional skills:**

*By the end of the course, students should be able to:*

- C1. Interpret signs, genetic and biochemical basis of xeroderma pigmentosum
- C2. Point-out the application of acute phase reactant proteins in diagnosis.

### **D. General skills:**

- d1. Work effectively in a group in lab or during preparation of seminars.
- d2. Respect the role of staff and co-staff members regardless of degree or occupation.

## **3-Contents**

### **ILO Topic**

#### **Knowledge and Understanding**

- a 1 Overview on CHO metabolism and its inborn error
- a 2 Overview on lipid and lipoprotein metabolism and its inborn error
- a 3 Overview on protein metabolism and its inborn error
- a4 Haem metabolism and its inborn error

#### **Intellectual skills b-**

- B 1 Hormones
- B2 Vitamins
- B3 Minerals
- B4 Immunoglobulins

#### **Professional and c practical skills**

- C1 xeroderma pigmentosum  
 C2 Acute phase reactant proteins

<b>Topic</b>	<b>Theoretical hours</b>	<b>Laboratory/ Practical</b>	<b>Total</b>
Overview on CHO metabolism and its inborn error.	1	.5	1.5
Overview on lipid and lipoprotein metabolism and its inborn error.	1	.5	1.5
Overview on protein metabolism and its inborn error	1	1	2
Haem metabolism and its inborn error	1	1	2
Hormones.	2	1	3
Vitamins.	1	1	2
Minerals	1	1	2
Immunoglobulins.	1	1	2
xeroderma pigmentosum.	1	1	2
Acute phase reactant proteins.	1	1	2
<b>Total hours</b>	11	9	20
<b>Total credit hours</b>	.7	.3	1

**4-Teaching methods:**

Lecture  
 Seminars

**5- Assessment methods:**

Written Examination for assessment of ILOs number A1-A4, B1-B4,C1-2.

Oral examination for assessment of ILOs number: A1-A4, B1-B4,C1-2.  
Log book for activities for assessment of mainly practical & transferrable skills.

**Assessment schedule:**

□ (written exam 150 mark and oral exam 50 mark with marks)

**Percentage of each Assessment to the total mark:**

\_Written exam: 75%

\_Oral exam: 25%

**6- List of references**

6.1- Course Notes: Lecture notes prepared by the staff members in the department.

6.2- Essential Books (Text Books): Harpers in Biochemistry.

6.3- Recommended Books: lipnocott in Biochemistry

**7- Resources / Facilities required for teaching and learning to achieve the above**

**ILOs**

New advanced laboratory facility and equipment to help teaching

- Overhead projectors
- Computers
- Microscope slides
- Laboratories instruments
- Internet club

*We certify that all of the information required to deliver this course is contained in the above specification and will be implemented*

**Course coordinator:**

**Name Prof. Dr.Halah El\_saed**