

COURSE SPECIFICATION of Medical Biochemistry for hepatology medicine

A- Administrative Information

Course Title: Medical Biochemistry

Code: HEPT818

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: 1st 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

Topic	Theoretical hours	Laboratory/ Practical	Total
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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
Total hours	11	9	20

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 (1.5hrs) 50 mark and oral exam 50 mark with marks)

Percentage of each Assessment to the total mark:

Written exam: 50%

Oral exam: 50%

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