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: 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

a 4 Haem metabolism and its inborn error

Intellectual skills b-

B 1 Hormones

B 2 Vitamins

B 3 Minerals

B 4 Immunoglobulins

Professional and c practical skills
C1 xeroderma pigmentosum
C2 Acute phase reactant proteins

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<thead>
<tr>
<th>Topic</th>
<th>Theoretical hours</th>
<th>Laboratory/Practical</th>
<th>Total</th>
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<td>Overview on CHO metabolism and its inborn error.</td>
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<tr>
<td>Overview on lipid and lipoprotein metabolism and its inborn error.</td>
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<td>Overview on protein metabolism and its inborn error</td>
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<td>Haem metabolism and its inborn error</td>
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<td>Hormones.</td>
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<td>Vitamins.</td>
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<td>Minerals</td>
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<td>Immunoglobulins.</td>
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<tr>
<td>xeroderma pigmentosum.</td>
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<tr>
<td>Acute phase reactant proteins.</td>
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<td><strong>Total hours</strong></td>
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4-Teaching methods:
Lecture
Seminars

5- Assessment methods:

**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.
6.3- 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
- Laboratorites 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