Faculty of Pharmacy  
Department Name: Biopharmaceutics and Clinical Pharmacy  
Course Title: Clinical Biochemistry II  
Course Code: 1203412  
Prerequisite: 1203411  
Course Coordinator: Dr Yasser Bustanj  
Instructor:

<table>
<thead>
<tr>
<th>Name</th>
<th>Office Number</th>
<th>Office Phone</th>
<th>Office Hours</th>
<th>E-mail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Yasser Bustanji</td>
<td>218</td>
<td>2659</td>
<td>To be arranged.</td>
<td><a href="mailto:bustanji@ju.edu.jo">bustanji@ju.edu.jo</a></td>
</tr>
</tbody>
</table>

This course is a continuation to Clinical Biochemistry (I) and covers the clinical aspects of diseases and their effect on body chemistry. Topics include Lipid metabolism and lipoproteins disorders, carbohydrate metabolism disorders, cardiac function tests, pancreatic function tests, endocrinology, metabolic aspects of malignant diseases, clinical aspects of pregnancy, and main hematological disorders.

Course Objectives:
At the end of this course, the student will be introduced to:
1. The changes to the body’s chemistry in lipid disorders and lipoprotein disorders
2. Carbohydrate metabolism disorders and their assessment
3. The principal biomarkers in assessment of cardiac function tests
4. Tumor markers
5. Biochemical changes during pregnancy
6. Endocrinology (pituitary gland disorders, thyroid gland dysfunction, gonadal function disorders)
7. Major hematological disorders

Intended Learning Outcomes for Clinical Biochemistry:
A. knowledge and understanding of:
1. Disorders in lipid metabolism
2. Disorders of carbohydrate metabolism
3. Tumor biochemical markers.
4. Biochemical markers involved in assessment of cardiac function
5. Biochemical markers involved in assessment pancreatic function.
6. Biochemical changes in pregnancy
7. Biochemical changes in endocrine dysfunction (pituitary dysfunction, Adrenal dysfunction thyroid dysfunction, gonadal dysfunction)

B. Cognitive and Intellectual Skills:
1. Relate the signs and symptoms to the molecular basis of diseases.
2. Relate the changes lipid profile to chronic diseases.
3. Correlate different disorders to each other, i.e carbohydrate metabolism disorders and lipid disorders and their relation to cardiovascular diseases
4. To interpret the changes cardiac proteins, enzymes to heart and cardiovascular disease.
5. Relate hormonal changes to endocrine disorders.
6. Relate the changes blood indices to hematological disorders.

**C. Transferable skills:**
1. Communicate effectively with the medical team concerning the use of laboratory tests in the diagnosis of diseases.
2. Interpret laboratory findings preformed in clinical practice.
3. Develop the skills of information management.

**Teaching Methods:**
Lectures and discussion of clinical cases.

**Assessment Methods:**
Exams (100%)
- Mid-term exam 40% (7th week)
- Quizes, reports and assignments 10%
- Final exam 50% (15th week)

**Course Content and Schedule:**
<table>
<thead>
<tr>
<th>Topic</th>
<th>No. of hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Introduction</td>
<td>1</td>
</tr>
<tr>
<td>2. Lipid metabolism</td>
<td>3</td>
</tr>
<tr>
<td>Lipoproteins metabolism, lipid profile and lipid disorder.</td>
<td></td>
</tr>
<tr>
<td>3. Disorders of Carbohydrate metabolism</td>
<td>2</td>
</tr>
<tr>
<td>Tests used to diagnose and manage diabetes mellitus.</td>
<td></td>
</tr>
<tr>
<td>4. Blood indices and hematological disorders</td>
<td>4</td>
</tr>
<tr>
<td>5. Cardiac function tests</td>
<td>3</td>
</tr>
<tr>
<td>6. Pancreatic function tests</td>
<td>2</td>
</tr>
<tr>
<td>Mid Term Exam</td>
<td>1</td>
</tr>
<tr>
<td>7. Tumor markers</td>
<td>4</td>
</tr>
<tr>
<td>8. Pituitary function tests</td>
<td>3</td>
</tr>
<tr>
<td>9. Adrenal function</td>
<td>2</td>
</tr>
<tr>
<td>10. Thyroid function tests</td>
<td>1</td>
</tr>
<tr>
<td>11. Biochemical changes during Pregnancy</td>
<td>5</td>
</tr>
</tbody>
</table>

Final Exam (50%)
References:


