

Faculty of Pharmacy

Department Name: Biopharmaceutics and Clinical Pharmacy

Course Title: Clinical Biochemistry

1203716

3hr credit

Course Contents and Schedule	Number of lectures
1. Case Discussions on the following topics: 1.1 Electrolytes: sodium, potassium, magnesium 1.2 Acid-base disturbances. 1.3 Calcium and phosphate. 1.4 Plasma proteins. 1.5 Liver function tests 1.6 Lipid metabolism. 1.7 Renal function tests. 1.8 Routine urine analysis.	12
2. Cardiac function tests. 2.1 Cardiac enzymes. 2.2 Cardiac proteins. 2.3 Other diagnostic tests.	3
3. Pancreatic function tests. 3.1 Secretin test. 3.2 Serum enzymes. 3.3 Other tests of pancreatic function.	3
4. Hematology. 4.1 CBC and RBCs indices. 4.2 WBCs differential count. 4.3 Biochemical aspects of hematology: iron, folate and B ₁₂ . 4.4 Coagulation factors: PT, PPT and INR 4.5 ESR	3
5. Tumor markers. 6.1 Introduction. 6.2 Prostate cancer. 6.3 Ovarian cancer. 6.4 Colon cancer.	3
6. Biochemical changes during pregnancy.	3
7. Projects presentation.	

Tests & Evaluations:

- 30% Mid-term exam.
- 30% Projects.
- 40% Final.

References:

1. Tietz Fundamental of Clinical Chemistry
5th edition, edited by Burtis C.A. and Ashwood E.R., 2001.
2. Clinical Chemistry: Principles, procedures, correlations
5th edition, Bishop et al. 2005.
3. Clinical Chemistry in Diagnosis and Treatment
6th edition, Mayne P.D., 1998
4. Clinical Chemistry
5th edition, Marshall W.J., 2004.

Projects:

1. Reference range determinations
2. Methods and equipments used for determination of lab data
3. Pituitary glands
4. Thyroid glands
5. Adrenal glands
6. Gonadal function and subfertility
7. Trace elements
8. Metal poisoning
9. DNA diagnosis
10. Clinical nutrition
11. Inherited metabolic disorders
12. Disorders of hemoproteins, porphyrin and iron
13. Body fluid analysis
14. Pediatric clinical chemistry

If Sunday the 28/12/2008 is off

Day	Date	Topics
Wednesday	24/12 (12-1.30)	Trace elements Metal poisoning Body fluid analysis
Monday	29/12 (11-1.30)	DNA diagnosis Pediatric clinical chemistry Inherited metabolic disorders Clinical nutrition
Wednesday	31/12 (12-1.30)	Disorders of hemoproteins, porphyrin and iron Pituitary glands Adrenal glands
Monday	5/1 (11-1.30)	Gonadal function and subfertility Thyroid glands

If Monday the 29/12/2008 is off

Day	Date	Topics
Wednesday	24/12 (12-1.30)	Trace elements Metal poisoning Body fluid analysis
Wednesday	31/12 (12-1.30)	DNA diagnosis Pediatric clinical chemistry Inherited metabolic disorders
Monday	5/1 (11-1.30)	Clinical nutrition Disorders of hemoproteins, porphyrin and iron Pituitary glands Adrenal glands
Wednesday	7/1 (12-1.30)	Gonadal function and subfertility Thyroid glands

Monday the 29/12/2008 is off

Day	Date	Topics
Wednesday	24/12 (12-1.30)	Trace elements Metal poisoning Body fluid analysis
Sunday	28/12/2008 (8-10)	Inherited metabolic disorders DNA diagnosis Pediatric clinical chemistry Disorders of hemoproteins, porphyrin and iron
Sunday	28/12/2008 (11-1)	Clinical nutrition Pituitary glands Adrenal glands
Wednesday	31/12 (12-1.30)	Thyroid glands Gonadal function and subfertility
Monday	5/1 (11-1.30)	
Wednesday	7/1 (12-1.30)	