Course Title	**Clinical biochemistry**	
Course Code	**BC5102**	
Academic Year	**2016/2017**	
Coordinator	**Prof. Tarek M Mohamed**	
Other Staff	**Dr. Thoria Diab**	
Semester	**Semester 2**	
Level	**Level**	
Pre-Requisite	**BC5101**	
Course Delivery	**Lecture** **Practical**	**14 x2h lectures** **12x 3h practical**
	credit	**3 hours**
Parent Department	**Chemistry Department**	

Contents

Clinical biochemistry (Two hour /Week)

Lecture 1 Erythrocytes and Heme synthesis and regulation
Lecture 2 Disorder of Heme synthesis and catabolism of Heme
Lecture 3 Hemoglobin (forms, structure)and disorders of Hb (Sickle cell anemia)
Lecture 4 Disorders of Hb (Thalassemia)
Lecture 5 Hemostasis and thrombosis
Lecture 6 Liver function tests (part I)
Lecture 7 Midterm
Lecture 8 Liver function tests (part II)
Lecture 9 Renal function tests (part I)
Lecture 10 Renal function tests (part II)
Lecture 11 Urine analysis and formation
Lecture 12 Lungs (function and disorders)
Lecture 13 Cardiovascular system (Vascular cells, Atherosclerosis)
Lecture 14 Cardiovascular system (cardiac muscle ,Myocardial infarction)

Practical (3h /weeks)

Practical 1 Physical and chemical examination of urine analysis
Practical 2 Microscopic examination and urinary calculi
Practical 3 Estimation of ammonium by titration and Nessler's methods
Practical 4 Estimation of urea, creatinine, creatine and uric acid in urine
Practical 5 Complete blood picture (Determination of Hb,RBCs counts, WBCs, counts, and erythrocyte indices).
Practical 6 Creatinine clearance.
Practical 7 Urea clearance
Practical 8 Estimation of serum uric acid
Practical 9 Estimation of serum glucose and glucose tolerence
Practical 10 Lipoprotein analysis(estimation of serum cholesterol, triglycerides and total lipids).
Practical 11 Estimation of serum iron and calcium
Practical 12 Estimation of serum ALT, AST, total protein and albumin