

توصيف مساق. Clinical Biochemistry 1 laboratory
كيمياء حيوية سريرية 1 العملي (0406345)

1. معلومات مدرس المساق (Instructor)

اسم (مدرس / منسق) المساق :	Dr. Amal Hisham Uzrail
الساعات المكتتبية :	د. أمل هشام عزريل حد - ثل - خ: 12 - 2
رقم المكتب والرقم الفرعي :	
البريد الإلكتروني :	amaluzrail@aabu.edu.jo
مساعد البحث والتدريس/المشرف/الفني (إن وجد):	

2. وصف المساق (Course Description)

This course is an introduction to general fundamentals and principles of clinical bio-analytical chemistry. This course aims to teach students the physiological and pathological principles regarding biochemical investigations, practical experience to measure different biochemical parameters, the interpretation of results and the clinical applications of such testing to the diagnosis. Topics include analysis of diabetic profile, kidney function tests, bilirubin as a parameter of liver function, cardiac enzymes, and urinalysis. Quality control and assurance are also covered in this course.

3. بيانات المساق (Course Title)

رقم المساق: 406345	اسم المساق: كيمياء حيوية سريرية 1 العملي	المستوى: الثالث
طبيعة المساق: عملي	المتطلب السابق: (406344) كيمياء حيوية سريرية (1) ومتزامن	وقت المحاضرة: 2-5
العام الجامعي: 2020 / 2021	الفصل الدراسي: الثاني	عدد الساعات الدراسية: 1

4. أهداف المساق (Course Objectives)

أ-	To discuss safety in the clinical bio-analytical chemistry laboratories
ب-	To practice phlebotomy and prepare plasma and serum

To enable the correct use of basic equipments and supplies such micropipetting and to achieve an understanding of fundamental concepts critical to any bio-analytical procedure	
To provide basic information about the quality control, quality assurance, and method evaluation	
To learn clinical chemistry procedures that yield accurate and precise information that aid in patient's diagnosis	ج-
To Perform basic mathematics and chemical calculations and discuss different units of measurements used to assess various biochemical analytes of clinical significance	ر

5. مخرجات التعلم (Intended Student Learning Outcomes)
(المعرفة والمهارات والكفايات)

يفترض بالطالب بعد دراسته لهذا المساق أن يكون قادرا على:

1. Understand basic laboratory quality control concepts and apply principles of safety regulations during testing.
2. Recognize the use of basic chemistry supplies and equipment and demonstrate an understanding of fundamental concepts critical to analytic procedure central to clinical chemistry.
3. Understand the principles and analytical procedures used in clinical chemistry laboratory to measure parameters including the following and interprets this measurement: (glucose, HbA1c, urea, creatinine, uric acid, ck, LDH, bilirubin and urinalysis).
4. Demonstrate the ability to perform these analytic procedures correctly, yielding accurate and precise results which will aid in patient diagnosis and treatment
5. Enhance student's creative and innovative thinking skills through "brainstorm" questions.

6. محتوى المساق (Course Content)

Week	Topic	
1	Introduction to clinical chemistry lab	
2	Phlebotomy & preparation of serum and plasma	
3	Review of micro-pipetting & laboratory calculations	
4	Overview of spectrophotometry	
5	Diabetic profile (measurement of glucose & HbA1c)	
6	Kidney function tests (Urea & creatinine)	
7	Midterm exam	
8	Kidney function tests (Creatinine clearance & uric acid)	1. ا
9	Liver function tests Bilirubin (Total, direct & indirect)	1. ا
10	Cardiac biomarkers (CK & LDH)	1. ا
11	Urinalysis (part-1)	1. ا
12	Urinalysis (part-2)	1. ا
13	Final exam	1. ا

ت التعليم والتعلم وطرق التقويم

(Teaching and learning Strategies and Evaluation Methods)

نوع التقويم/القياس (امتحان/عروض صفية/مناقشة/واجبات)	أنشطة التعلم	استراتيجيات التدريس	مخرجات التعلم	ت
Exam /assignment	Brain storming, discussion	Lecture/practical	Understand basic laboratory quality control concepts and apply principles of safety regulations during testing.	1
Exam /assignment	Brain storming, discussion	Lecture/practical	Recognize the use of basic chemistry supplies and equipment and demonstrate an understanding of fundamental concepts critical to analytic procedure central to clinical chemistry.	2
Exam /assignment	Brain storming, discussion	Lecture/practical	Understand the principles and analytical procedures used in clinical chemistry laboratory to measure parameters including the	3

			following and interprets this measurement: (glucose, HbA1c, urea, creatinine, uric acid, ck, LDH, bilirubin and urinalysis).	
Exam /assignment	Brain storming, discussion	Lecture/practical	Demonstrate the ability to perform these analytic procedures correctly, yielding accurate and precise results which will aid in patient diagnosis and treatment	
Exam/assignment	Brain storming, discussion	Lecture/practical	Enhance student's creative and innovative thinking skills through .“brainstorm” questions	4

1. تقييم الطلبة
(Assessment)

توزيع الدرجات لكل أسلوب	توقيت التقييم	الأساليب المستخدمة
20	خلال الفصل	1-أعمال الفصل: (تقرير، وظائف، حضور)
30	As announced	2-امتحان تحريري Midterm
50	أسبوع الامتحانات النهائية	3-امتحان تحريري نهائي

2. الكتاب المقرر (Text Book)

Clinical Chemistry: Techniques, Principles, Correlations	المرجع الرئيس
Bishop. ML, Fody., E.P. Schoeff, LE ,	المؤلف
Lippincott Williams & Wilkins	الناشر
2010	السنة
Sixth Edition	الطبعة
ISBN: 978-0781790451	الموقع الالكتروني للمرجع

4-المراجع الإضافية (References) (وتشمل الكتب والبحوث المنشورة في الدوريات او المواقع الالكترونية

Power point lectures and leaflets for different tests