



جامعة آل البيت
دائرة ضمان الجودة والتخطيط

كلية العلوم
قسم العلوم الطبية المخبرية

توصيف مساق. Clinical Biochemistry 2
كيمياء حيوية سريرية 2 (0406445)
1. معلومات مدرس المساق (Instructor)

Dr. Amal Hisham Uzrail د. أمل هشام عزريل حد - ثل - خ: 2-12	اسم (مدرس / منسق) المساق: الساعات المكتبي ة: رقم المكتب والرقم الفرعي: البريد الإلكتروني: مساعد البحث والتدريس/المشرف/الفني (إن وجد):
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2. وصف المساق ((Course Description))

This course is an introduction to general fundamentals and principles of clinical endocrinology, and other important topics in clinical chemistry. It is a combined lecture and laboratory course covering methods of analysis as well as the biochemical components of body fluids. Student also will gain an important practical and clinical skills and knowledge needed for conducting and interpreting the .clinical laboratory tests in the chemistry laboratory sections

3. بيانات المساق (Course Title)

المستوى: الثالث	اسم المساق: كيمياء حيوية سريرية 2	رقم المساق: 406445
وقت المحاضرة: 11-12	المتطلب السابق: كيمياء حيوية سريرية 1	طبيعة المساق: نظري
عدد الساعات الدراسية: 2	الفصل الدراسي: الاول	العام الجامعي: 2020 / 2021

4. أهداف المساق (Course Objectives)

Learn about endocrinology and various biochemical components (electrolytes, trace elements, proteins, enzymes, lipids, carbohydrates, and non-protein nitrogen compounds) in human body fluids, and understand their biochemistry, physiology, and clinical significance.	أ-
To enable the correct use of basic equipments and supplies and to achieve an understanding of fundamental concepts critical to any bio-analytical procedure.	ب-

To learn clinical chemistry procedures that yield accurate and precise information that aid in patient's diagnosis	ج-
To provide basic information about the quality control, quality assurance, and method evaluation	د-
To describe and discuss different units of measurements used to assess various biochemical analytes of clinical significance	ر
To discuss safety in the clinical bio-analytical chemistry laboratories	ز

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

يفترض بالطالب بعد دراسته لهذا المساق أن يكون قادراً على:

1. Understand basic laboratory quality control concepts and apply principles of safety regulations during testing.
2. Understand the theory and Knowledge in clinical chemistry that is needed for interpretation of test results in case of health and disease.
3. Discuss the basic disorders of the different organs and define which laboratory tests may be performed to diagnose them.
4. Enhance student's creative and innovative thinking skills through "brainstorm" questions.
5. Use a wide range of idea based on their knowledge in this course to suggest research method related to chemistry and apply that on different scientific fields

6. محتوى المساق (Course Content)

الموضوع	الأسبوع
<ul style="list-style-type: none"> • Review: Clinical chemistry-basic principles and practice of clinical chemistry, quality control, diagnostic efficiency, Quality assurance. 	الأول
<ul style="list-style-type: none"> • Essential trace elements: Laboratory diagnosis and biochemical testing (Zinc, copper and Iron) 	الثاني
<ul style="list-style-type: none"> • Thyroid gland disorder, diagnostics and clinical laboratory testing 	الثالث
<ul style="list-style-type: none"> • Hormones of hypothalamus and hypophysis: Diagnostics and clinical laboratory testing: prolactin, FSH, LH, oxytocin, ADH, TSH, ACTH and STH (GH) 	الرابع

<ul style="list-style-type: none"> Adrenal cortex hormones: disorders and clinical laboratory testing 	الخامس
<ul style="list-style-type: none"> Hormone tests for ovarian and testicular disorders 	السادس
<ul style="list-style-type: none"> Clinical laboratory examinations during pregnancy Vitamins: Laboratory diagnosis and biochemical testing 	السابع
Midterm exam	
<ul style="list-style-type: none"> Toxicological indications and tests in clinical laboratories 	الثامن
<ul style="list-style-type: none"> Laboratory diagnosis and biochemical testing of liver diseases Laboratory diagnosis and biochemical testing of jaundice 	التاسع
<ul style="list-style-type: none"> Laboratory diagnosis and biochemical testing of acute and chronic renal failure 	العاشر
<ul style="list-style-type: none"> Laboratory diagnosis and biochemical testing of pancreas disorders Laboratory diagnosis and tests of GIT pathologies 	الحادي عشر
<ul style="list-style-type: none"> Metabolic disorders of proteins Clinical enzymology and biomarkers 	الثاني عشر
<ul style="list-style-type: none"> CSF analysis Bone metabolism and clinical markers 	الثالث عشر
<ul style="list-style-type: none"> Cardiac disorders and clinical markers Laboratory diagnosis and tests of tumor 	الرابع عشر
<ul style="list-style-type: none"> Laboratory diagnosis of inherited metabolic diseases Revision 	الخامس عشر
الامتحان النهائي	
	السادس عشر

1. استراتيجيات التعليم والتعلم وطرق التقويم (Teaching and learning Strategies and Evaluation) (Methods)

ت	مخرجات التعلم	استراتيجيات التدريس	أنشطة التعلم	نوع التقويم/القياس (امتحان/عروض صفية/مناقشة/واجبات)
1	Understand basic laboratory quality control concepts and apply principles of safety regulations during testing	Brain storming, discussion	lecture	Exam/quiz

Exam/quiz	Lecture	Brain storming, discussion	Understand the theory and Knowledge in clinical chemistry that is needed for interpretation of test results in case of health and disease.	2
Exam/quiz	lecture	Brain storming, discussion	Discuss the basic disorders of the different organs and define which laboratory tests may be performed to .diagnose them	3
Exam/assignment	Lecture	Group discussion brain storming	Enhance student's creative and innovative thinking skills through "brainstorm" questions	4
Exam /assignment	Lecture	Group discussion and brain storming	Use a wide range of idea based on their knowledge in this course to suggest research method related to chemistry and apply that on different scientific fields	5

2. تقييم الطلبة (Assessment)

توزيع الدرجات لكل أسلوب	توقيت التقييم	الأساليب المستخدمة
10	خلال الفصل	1-أعمال الفصل: (تقرير، وظائف، حضور)
40	الأسبوع لثامن	2-امتحان تحريري Midterm
50	أسبوع الامتحانات النهائية	3-امتحان تحريري نهائي

3. الكتاب المقرر Theory(Text Book)

Clinical Biochemistry: An illustrated color textbook	المرجع الرئيس
Michal Murphy, Rajeev Srivastava and Kevin Deans	المؤلف
Elsevier Health Company	الناشر
2019	السنة
6 th Edition	الطبعة
	الموقع الالكتروني للمرجع

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

Clinical Biochemistry: Fundamentals of Biomedical Science. (2017). Authors: Nessar Ahmad. 2th edition, Publisher: Oxford University, UK.	-1
Clinical Biochemistry (2016). Authors: Vladimir Bartos, MilanDastyh and Tomas Frank. First edition, Publisher: Charles University, UK	-2
Introduction to Clinical Biochemistry: Interpreting blood results (2010). Authors: Graham Basten. First edition, Publisher: Ventus Publishing Aps	-3
Tietz, N.W.; Fundamentals of Clinical Chemistry. ISBN 0721688624 - Publisher: Saunders - Release date: 1986.	-4
Marshall, W.J., Bangert, S.K.; Clinical Chemistry 6th edition, ISBN 0-7234-3328-3 - Publisher: Mosby, Release date: 2008.	-5
Christenson, R.H., Gregory, L.C., Johnson, J.L.; APPLETON & LANGES OUTLINE REVIEW CLINICAL CHEMISTRY 1st edition, ISBN 0070318476. Publisher: McGraw-Hill Medical Publishing Division-Releaseate 2001.	-6