



جامعة المجمعة
Majmaah University

وكالة الجامعة للشؤون التعليمية
إدارة البرامج الدراسية والتطوير

نموذج (5)

مختصر توصيف مقرر

كيمياء حيوية 2

CHM-362

(Course Syllabus)

(Course Information) *

معلومات المقرر

معلومات المقرر * (Course Information):

اسم المقرر:	كيمياء حيوية 2
رقم المقرر:	CHM-362
اسم ورقم المتطلب السابق:	CHM-361 كيمياء حيوية 1
اسم ورقم المتطلب المرافق:	لا يوجد
مستوى المقرر:	المستوى السادس
الساعات المعتمدة:	3
Module Title:	Biochemistry-2
Module ID:	CHM-362
Prerequisite (Co-requisite) :	CHM- 361
Co-requisite :	Nil
Course Level:	6 th level
Credit Hours:	3

Module Description

وصف المقرر:

Chemistry of Biochemistry2 course is (3) credit hours, course offered in the Sixth level of the chemistry curriculum. The overall objective of CHEM362 is to provide a general knowledge To Enzymes, Vitamins as they linked to Metabolism regarding what happened from changes as well as reactions. Identify some Biological fluids (Blood, Urine and Milk). Ingredients and Biological Importance. Study the Nucleic acids, Nucleotides.

Module Aims

أهداف المقرر:

1	Studying the Enzymes structure, importance, properties and factors that affect their activities.
2	Describe nucleic acids and to know their importance and functions for living organisms.
3	Studying vitamins dissolved in fats, vitamins dissolved in water, and how to differentiate between them.
4	Recognize various Hormones and their importance and functions of the organism.
5	Identify some Biological fluids (Blood, Urine, and Milk): Ingredients and Biological importance.

Learning Outcomes:

مخرجات التعليم:

Upon successful completion of this course, a student will be able to:

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| 1.1 | Identify hormone and enzyme ingredients' and how can to differentiate between them |
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1.2	Recognize the importance of nuclic acids, vitamins, minerals and Biological fluids.	
2.1	Compare the difference between dissolved vitamins in water and that dissolved in fat.	
2.3	Explains the mechanism of action of the enzyme and hormone.	
3.1	Show the ability to work in a teamwork environment and lead the team while performing the tasks entrusted to him professionally.	
4.2	Demonstrate the ability to use modern technology and its applications that are used in various fields of biochemistry.	
5.1	Demonstrate testing standards to achieve success in Practical Experiments.	

Course Contents:

محتوى المقرر:

ساعات التدريس (Hours)	عدد الأسابيع (Weeks)	قائمة الموضوعات (Subjects)
4	2	Nucleic Acids and Nucleotides.
2	1	Enzymes; General Specifications, Importance, Nomenclature.
2	1	Enzymes Classification, its Affecting factors.
2	1	Enzyme Motility, Inhibitor, Isoenzymes and Coenzyme.
2	1	Importance of Hormones and Mechanism.
4	2	Hormones Classification (Pituitary gland, Thyroid gland, Parathyroid gland, Pancreas, Sexual Hormones and Adrenal gland).
2	1	Vitamins Specifications- Water-soluble vitamins.
4	2	Lipid Soluble Vitamins (D, E, K, A).
8	4	Biological Fluids (Blood, Urine, and Milk).
PRACTICAL		
4	2	Effect of Amylase Enzyme on Starch, Lipid and Protein.
4	2	Study of the factors affecting the activity of enzymes.
2	1	Estimation of the activity of Enzyme Pepsin.
2	1	Estimation of the activity of Enzyme lipase.
2	1	Estimation of the activity of Enzyme Trypsin.
2	1	Purification and determination of the catalase enzyme from the plant.
2	1	Separation of amino acids by TLC.

2	1	Blood Separation, Study some Serum and Plasma Components. And Calcium Estimation.
2	1	Lactose Quantitative Estimation.
4	2	Chemistry of Urine.

Textbook and References:

الكتاب المقرر والمراجع المساندة:

ISBN	سنة النشر Publishing Year	اسم الناشر Publisher	اسم المؤلف (رئيسي) Author's Name	اسم الكتاب المقرر Textbook title
ISBN-10: 0123997097 ISBN-13: 978-0123997098	2011	Academic Press	Gerald Litwack	Vitamins and Hormones Volume 60
	سنة النشر Publishing Year	اسم الناشر Publisher	اسم المؤلف (رئيسي) Author's Name	اسم المرجع Reference
ISBN-13: 978-9350254844 ISBN-10: 9350254840	2011	Jaypee Brothers Medical Publishers(P)LTD	Rana Shinde	Textbook of Medical Biochemistry, Eighth Edition

