

معلومات المقرر * (Course Information):

اسم المقرر:	كيمياء عضو معدنية
رقم المقرر:	CHM 345
اسم ورقم المتطلب السابق:	CHM 242
اسم ورقم المتطلب المرافق:	لا يوجد
مستوى المقرر:	المستوى السابع
الساعات المعتمدة:	2
Module Title:	Nano Chemistry
Module ID:	CHM 453
Prerequisite (Co-requisite) :	CHM 333
Co-requisite :	No requests
Course Level:	Level 7
Credit Hours:	2 Credit Hours

Module Description

وصف المقرر :

The course introduces the concept of Nano chemistry, including the types of Nano particles. The primary emphasis will be on the fundamental of Nano chemistry, and their Characterization properties, synthesis and application. Two lecture hours per week. Two Credit hours. Prerequisite CHM 333

Module Aims

أهداف المقرر :

1	This course aims to familiarize students with the basic concept of Nano chemistry
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Learning Outcomes: By the end of my course, students should be able to

1	Demonstrate knowledge and understanding of principles relating to Nano
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	chemistry	
2	Describe the chemical and physical behavior of Nano Particles	
3	Explain the property of Nano particles	
4	Explain the analysis and application of Nano materials.	
5	Work independently and as part of a team.	
6	Able to use a computer as a tool in writing, drawing chemical structures and Saudi digital Library.	

Course Contents:

محتوى المقرر:

ساعات التدريس (Hours)	عدد الأسابيع (Weeks)	قائمة الموضوعات (Subjects)
4	2	Introduction of Nano chemistry
4	2	Types of Nano particles, Nano compositions and Nano structures
4	2	Distinction property of Nano particles, molecular, bulk material.
4	2	Nano structure and Nano materials Characterization and properties.
2	1	Classification of Crystal based on the bonding characteristics.
4	2	Quantum mechanics theory and Schrodinger Equation (Why properties of material change at nanoscale?)
4	2	Synthesis of Nano materials by physical and chemical Methods.
4	2	Analysis of Nano materials and application.
30	15	Total

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-13: 978-0854046645	2005	Society of Chemistry	G. Ozin and A. arsenault,	Nanochemistry: A chemical approach

صفحة 2 من 3



				to Nanomaterials
	سنة النشر Publishing Year	اسم الناشر Publisher	اسم المؤلف (رئيسي) Author's Name	اسم المرجع Reference
ISBN: 978-0-444-59397-9	2013	Elsevier	G. Sergeev and K. Klabunde	Nanochemistry

* يتم تعبئة معلومات المقرر فقط باللغتين العربية والانجليزية وباقي المعلومات بلغة التدريس المعتمدة ويكرر لكل مقرر في الخطة الدراسية

* Course Information should be filled in Arabic and English. Other information should be filled using the approved teaching language at the college.