

نموذج توصيف مقرر
Course Description Form

Name of College\Faculty : Science

Name of Department: Chemistry

اسم الكلية:

اسم القسم العلمي:

Course Name	Organic Chemistry: Photochemistry	اسم المقرر
Course No.	CHEM 457	رقم المقرر
No. of Credits	3	عدد الوحدات
Theoretical Hours	3	عدد الساعات النظرية
Practical Hours	0	عدد الساعات المحلّية
Course topics مواضيع المقرر		
Light absorption by organic molecules and effects thereof. Static and dynamic properties of excited states and mechanisms of excited-state processes. Photochemical reactions of alkenes, arenes, carbonyl compounds, and other fundamental organic molecules.		
Text book: (Name, Author , Year , Publisher)		عنوان الكتاب : (الاسم ، المؤلف ، سنة الطبع ، دار النشر)
Nicholas J. Turro, V. Ramamurthy, Juan Scaiano, Modern Molecular Photochemistry of Organic Molecules, Latest Edition.		
References: (Name , Author , Year . Publisher)		عنوان المرجع : (الاسم ، المؤلف ، سنة الطبع ، دار النشر)
None.		

Prerequisites		متطلبات المقرر			
CHEM 355					
Grading	Exams		%		الاختبارات
	Quizzes		%		امتحانات قصيرة
	H.W.		%		واجبات
	Project (field study)		%		مشاريع (دراسة ميدانية)
	Final		%		الاختبار النهائي
آلية رصد المقرر					

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Chapters included:

Chapter	Topic	Sections Included	Sections Excluded
CH.1	Molecular Photochemistry of Organic Compound: An Overview	1-9	
CH.2	Electronic, Vibrational, and Spin Configurations of Electronically Excited States	1, 7, 8, 10	
CH.4	Radiative Transitions between Electronic States	1, 3, 4, 6, 7	
CH.7	Energy Transfer and Electron Transfer	1, 4, 11	
CH.8	Mechanistic Organic Photochemistry	1, 5, 7, 10, 13	
CH.9	Photochemistry of Olefins	1, 5-8, 8, 18, 19, 23, 24, 26, 27	
CH.12	Photochemistry of Aromatic Molecules	1, 3, 5, 7-12, 19	
CH.14	Molecular Oxygen and Organic Photochemistry	1, 2, 4-6	

Course objectives					
No.	Course Objectives (Learning Outcomes)	Example(s) of relevant (Topics and activities)	Recommended Level to satisfy the objectives		
			High	Medium	Low
1	To introduce photophysical processes necessary for the understanding of photochemical transformations.			X	
2	To describe and discuss photochemical reactions of		X		



	selected organic systems and functional groups.				
3	To emphasize the interrelation between photophysical processes and photochemical reactions and contrast thermal and photochemical reactions.		X		
Fields					
Skills					
Coordinator (Name and Rank) :	Convener of the organic chemistry				
Signature and stamp :					
Date:	11\ 11 \2025				