

## Course Syllabus

1	Course title	Introduction to Supramolecular Chemistry	
2	Course number	0303420	
3	Credit hours	3(theory)	
	Contact hours (theory, practical)	3(theory)/week	
4	Prerequisites/corequisites	0303321 + 0303232	
5	Program title	B.Sc. Chemistry	
6	Program code	0303	
7	Awarding institution	University of Jordan	
8	School	Science	
9	Department	Chemistry	
10	Course level	Fourth Year	
11	Year of study and semester(s)	2024/2025 Second	
12	Other department(s) involved in teaching the course	None	
13	Main teaching language	English	
14	Delivery method	<input checked="" type="checkbox"/> Face to face learning <input type="checkbox"/> Blended <input type="checkbox"/> Fully online	
15	Online platforms(s)	<input checked="" type="checkbox"/> Moodle <input checked="" type="checkbox"/> Microsoft Teams <input type="checkbox"/> Skype <input type="checkbox"/> Zoom <input type="checkbox"/> Others.....	
16	Issuing/Revision Date	27-08-2024	



مركز الاعتماد  
وإضمان الجودة  
ACCREDITATION & QUALITY ASSURANCE CENTER

### 17 Course Coordinator:

Name: Dr. Hazem Amarne

Contact hours: 1:30-2:30 Sun. + Tue.

2:00-3:00 Mon. +Wed.

Office number: Chemistry Annex Rm. 417

Phone number: 22182

Email: h.amarne@ju.edu.jo

### 18 Other instructors:

Name:

Office number:

Phone number:

Email:

Contact hours:

Name:

Office number:

Phone number:

Email:

Contact hours:

### 19 Course Description:

This course will enable students to learn the fundamental principles of non-covalent chemistry: molecular recognition, supramolecular chemistry, and self-assembly of small molecules. The supramolecular or non-covalent chemistry will be exploited to determine possible applications.

## 20 Course aims and outcomes:

### A- Aims:

The objective of this course is for students to learn the fundamental principles of molecular recognition, supramolecular chemistry, and self-assembly of small molecules.

### B- Intended Learning Outcomes (ILOs): Upon successful completion of this course students will be able to:

- (i) Identify different types of non-covalent interactions.
- (ii) Understand the molecular recognition properties of common receptors.
- (iii) Understand the principles of self-assembly and template directed syntheses of complex molecular architectures.
- (iv) Understand the importance of non-covalent interactions in different applications.

SLOs SLOs of the course	SLO (1)	SLO (2)	SLO (3)	SLO (4)
1	✓			
2	✓			
3	✓	✓		
4	✓	✓		
5				
6				

## 21. Topic Outline and Schedule:

Topic	Week	Instructor	Achieved ILOs	Evaluation Methods	Reference
Introduction and concepts	1	H. Amarne	1	Quiz	J. W. Steed Chapter 1
Cation binding	2+3+4	H. Amarne	1+2	Quiz	J. W. Steed Chapter 3
Anion binding	5+6	H. Amarne	1+2	Midterm	J. W. Steed Chapter 4
Simultaneous cation and anion binding	7	H. Amarne	1+2	Midterm	J. W. Steed Chapter 5
Neutral guest binding	8+9	H. Amarne	1+2	Midterm	J. W. Steed Chapter 6
Self-assembly	10+11	H. Amarne	3	Final exam	J. W. Steed Chapter 10
Applications	12+13+14	H. Amarne	4	Final exam	J. W. Steed Chapter 11+12+15

## 22 Evaluation Methods:

Opportunities to demonstrate achievement of the SLOs are provided through the following assessment methods and requirements:

Evaluation Activity	Mark	Topic(s)	SLOs	Period (Week)	Platform
Quiz	20	As per Sec. 21 above	1+2	Week 5	none
Midterm Exam	30	As per Sec. 21 above	1+2	Week 10	none
Final Exam	50	As per Sec. 21 above	1+2+3+4	Week 16	none

## 23 Course Requirements

Laptop/pc/or mobile phone, internet, MS Teams account, and Moodle account

## 24 Course Policies:

A- Attendance policies: All students are expected to follow the of attendance policies of the University of Jordan, absences exceeding 15% of total number of class meeting (6 hour classes) will result in F grade or course drop.

B- Absences from exams and handing in assignments on time: University rules and regulations regarding make-up exams.

C- Health and safety procedures: N/A

D- Honesty policy regarding cheating, plagiarism, misbehaviour: University rules and regulations.

E- Grading policy: University rules and regulations

F- Available university services that support achievement in the course: N/A



## 25 References:

A- Required book (s), assigned reading and audio-visuals:

1. “Supramolecular Chemistry”  
By: Jonathan W. Steed; Jerry L. Atwood.  
John Wiley & Sons, Ltd. 2022. 3<sup>rd</sup> Ed.
2. “Supramolecular Chemistry: Fundamentals and Applications”  
By: Paul Beer, Timothy Barendt, Jason Lim  
Oxford University Press 2022. 2<sup>nd</sup> Ed.

B- Recommended books, materials, and media:

1. “Supramolecular Chemistry: From concepts to applications”  
By: Stefan Kubik  
Walter de Gruyter 2024. 2<sup>nd</sup> Ed.

## 26 Additional information:

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Name of Course Coordinator: Dr. Hazem Amarne ----- Date: 27/08/2024	Signature: -----
Head of Curriculum Committee/Department: ----- -----	Signature: -----
Head of Department: ----- -----	Signature: -----
Head of Curriculum Committee/Faculty: ----- -----	Signature: -----
Dean: -----	Signature: -----