

Course Description Form

University: Mosul College: Science Department: Chemistry

1. Course Name: Stereochemistry

2. Course Code: SCCH20-F6082

3. Semester / Year: Course 2

4. Description Preparation Date: 2/2024

5. Available Attendance Forms: MSc. Students – s

6. Number of Credit Hours (Total) / Number of Units (Total):

30/2

7. Course administrator's name (mention all, if more than one name):

Prof.Dr. Salim Jasim Mohammed

8. Course Objectives

Course Objectives

This course provides an in-depth study of stereochemistry including chirality, stereoisomers, conformational analysis, stereoselective reactions, and stereochemical representations

9. Teaching and Learning Strategies

Strategy

Using all of ways and tools for teaching in order to achieves understanding

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
Week 1	2		Introduction to sterchemistry	Blended learning	Ask equation
Week 2	2		configuration, conformation,	Blended learning	Quiz

Week 3	2		isomerization	Blended learning	Discussion
Week 4	2		Types of isomerism, molecular	Blended learning	Seminar
Week 5	2		enantiomers and diastereomers	Blended learning	Ask for other applications
Week 6	2		chirality, optical isomerism	Blended learning	Home work
Week 7	2		stereoisomer representation	Blended learning	Mid exam
Week 8	2		Erythro/Threo isomers, meso compounds	Blended learning	Ask equations
Week 9	2		racemization, multiple	Blended learning	Discussion
Week 10	2		stereocenters, racemic mixtures	Blended learning	Home work
Week 11	2		Fischer projection	Blended learning	Seminar
Week 12	2		Stereoselectivity	Blended learning	Discussion
Week 13	2		R & S rules	Blended learning	Quiz
Week 14	2		absolute and relative configuration	Blended learning	Answer equations
Week 15	2		stereochemistry of cyclic compounds	Blended learning	Discussion

11. Course Evaluation

Daily preparation : 3%

Quiz : 5%

Daily writing:2%

Monthly : 15%

Reports : 5% End of semester exam :70%	
12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	<ul style="list-style-type: none"> • Morrison, R. T., & Boyd, R. N. Organic Chemistry. 7th Edition, Prentice Hall, 2021-
Main references (sources)	<ul style="list-style-type: none"> • Eliel, E. L., Wilen, S. H., & Doyle, M. P. Basic Organic Stereochemistry. Wiley, 2020. • Carreira, E. M., & Yamamoto, H. Advances in Modern Stereoselective Synthesis, Chemical Reviews, 2022. • Liu, P., et al. Recent Developments in Asymmetric Catalysis, Nature Catalysis, 2021. • Olivo, G., et al. Dynamic Stereochemistry and Its Applications, Chemical Society Reviews, 2023. • Stereochemistry reference texts
Recommended books and references (scientific journals, reports...)	Advance scientific reviews in different types spectroscopies
Electronic References, Websites	
Curriculum update rate	%15

Name and Signature of Course administrator's

**Name and Signature of the
department head**

Dr.Salim Jasim Mohammed