Course Description Form

1. Course Name:	
Organic Pharmaceutical Chemistry I	
2. Course Code:	
Phpch23_328	
3. Semester / Year:	
2nd Semester/ 3rd year	
4. Description Preparation Date:	
21/03/2024	
5. Available Attendance Forms:	
Students' signatures on attendance sheets	
6. Number of Credit Hours (Total) / Number of Units (Total)	
3 hours theory + 2 hours practical (75) / 4 units	
7. Course administrator's name (mention all, if more than one name)	

Theory

Name: Assist. Prof. Dr. Mohammed Najim Abed
Email: m.n.abed@uomosul.edu.iq
Name: Assist. Prof. Dr. Mahmood Hashim Mahmood
Email: mh.jasim@uomosul.edu.iq
Name: Assist. Prof. Dr. Wejdan Nazar
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Practical

Name: Lec. Sema'a Mahmood
Email: seem_univ@uomosul.edu.iq
Name: Lec. Bara Aldabagh
Email: bara.aldabagh@uomosul.edu.iq

8. Course Objectives	
Course Objectives	• Introducing the students to pharmaceutical chemistry • Explaining modern drug design techniques • Introducing drug metabolism

9. Teaching and Learning Strategies	
Strategy	• Theory lectures with teaching aids such as videos and diagrams • Practical sessions where students actively perform experiments

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1+2	4+4	• Understanding the role of pharmaceutical chemistry in drug distribution • Understanding redox reactions	• Drug distribution • Redox reactions	• Lectures • Practical	• Paper-based exams • Lab-based unknows
2+3	3+4	• Understanding the effect of chemical properties on drug action	• Acid-base properties • Redox reactions	• Lectures • Practical	• Paper-based exams

		• Understanding redox reactions			• Lab-based quiz
3+4	5+2	• Understanding the concept of QSAR in drug design • Understanding redox reactions	• Statistical prediction of pharmacological activity • Redox reactions	• Lectures • Practical	• Paper-based exams • Lab-based quiz
5+6+7	9	• Applying the concepts of computer simulations to drug design	• Molecular modeling (Computer aided drug design) • Drug receptor interaction: force involved • Steric features of drugs • Optical isomerism and biological activity • Calculated conformation • Three-dimensional quantitative structure activity relationships and databases • Isosterism • Drug-receptor interaction and subsequent events	• Lectures	• Paper-based Exams
5+6	4	• Assay of ferrous sulfate	• Assay of ferrous sulfate	• Practical	• Lab-based unknown and quiz
7+8	4	• Preparation and standardization of 0.1Na2S2O4 solution	• Preparation and standardization of 0.1Na2S2O4 solution	• Practical	• Lab-based unknown and quiz
8-15	24	• Understanding the concept of drug metabolism and the factors affecting it	• General pathways of drug metabolism	• Lectures	• Paper-based exam
9+10	4	• Assay of copper sulfate	• Assay of copper sulfate	• Practical	• Lab-based unknown and quiz

11+12	4	• Assay of Chlorinated Lime	• Assay of Chlorinated Lime	• Practical	• Lab-based unknown and quiz
13+14	4	• Preparation and assay of Lugol's Solution	• Preparation and assay of Lugol's Solution	• Practical	• Lab-based unknown and quiz
15	2	• Assay of Alum	• Assay of Alum	• Practical	• Lab-based unknown and quiz

11. Course Evaluation

- 20 M: Theoretical assessment (paper-based midterm exam, attendance)
- 20 M: Practical assessment (attendance, quizzes, unknowns, reports)
- 60 M: paper-based theoretical final exam

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- 100 M total

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Wilson and Gisvold Textbook of Orga medicinal and Pharmaceutical chemis Delgado JN, Remers WA, (Eds); 12thediti 2010 Laboratory Handbook for Pract Pharmaceutical Chemistry adopted by department.
Main references (sources)	Wilson and Gisvold Textbook of Orga medicinal and Pharmaceutical chemis Delgado JN, Remers WA, (Eds); 12thediti 2010 Laboratory Handbook for Pract Pharmaceutical Chemistry adopted by department.
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	