Course Description Form

1. Course Name:
Organic Pharmaceutical ChemistryI
2. Course Code:
Phpch24_328
3. Semester / Year:
2nd Semester/ 3rdyear
4. Description Preparation Date:
22/01/2025
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 Email: wejdan.nazar@uomosul.edu.iq
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, unknows, 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 Practi 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 Practi Pharmaceutical Chemistry adopted by department.
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	
Update percentage	Evaluation coarse but there is an addition of illustration tools which constitute about 2 % change.