

## Course Description Form

1. Course Name:					
Inorganic Pharmaceutical Chemistry					
2. Course Code:					
Phpch23_312					
3. Semester / Year:					
1 <sup>st</sup> Semester/3 <sup>rd</sup> Year					
4. Description Preparation Date:					
24/03/2024					
5. Available Attendance Forms:					
Students' signatures on attendance sheets					
6. Number of Credit Hours (Total) / Number of Units (Total)					
2 hours theory + 2 hours practical (60) / 3 units					
7. Course administrator's name (mention all, if more than one name)					
Theory					
Name: Assist. Prof. Dr. Ahmed AJ Mahmood					
Email: <a href="mailto:ahmedsot@uomosul.edu.iq">ahmedsot@uomosul.edu.iq</a>					
Name: Assist. Prof. Dr. Wejdan Nazar					
Email: <a href="mailto:wejdan.nazar@uomosul.edu.iq">wejdan.nazar@uomosul.edu.iq</a>					
Practical					
Name: Lecturer Sema'a Mahmood					
Email: <a href="mailto:seem_univ@uomosul.edu.iq">seem_univ@uomosul.edu.iq</a>					
Name: Lec. Bara Aldabagh					
Email: <a href="mailto:bara.aldabagh@uomosul.edu.iq">bara.aldabagh@uomosul.edu.iq</a>					
8. Course Objectives					
<b>Course Objectives</b>		<ul style="list-style-type: none"> <li>• Introducing the students to atoms and elements</li> <li>• Explaining the role of inorganic products in pharmacy</li> </ul>			
9. Teaching and Learning Strategies					
<b>Strategy</b>		<ul style="list-style-type: none"> <li>• Theory lectures with teaching aids such as videos and diagrams</li> <li>• Practical sessions where students actively perform experiments</li> </ul>			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1-3	6	<ul style="list-style-type: none"> <li>• Understanding the structure of atoms and molecules</li> </ul>	<ul style="list-style-type: none"> <li>• Atomic and molecular structure/ Complexation</li> </ul>	<ul style="list-style-type: none"> <li>• Lectures</li> </ul>	<ul style="list-style-type: none"> <li>• Paper-based exams</li> </ul>
4-6	6	<ul style="list-style-type: none"> <li>• Understanding the concept of essential and non-essential elements</li> </ul>	<ul style="list-style-type: none"> <li>• Essential and trace ions: Iron, copper, sulfur, iodine</li> <li>• Non-essential ions: Fluoride, bromide, lithium, gold, silver and mercury</li> <li>• Gastrointestinal agents: Acidifying agents</li> </ul>	<ul style="list-style-type: none"> <li>• Lectures</li> </ul>	<ul style="list-style-type: none"> <li>• Paper-based exams</li> </ul>
7	2	<ul style="list-style-type: none"> <li>• The chemistry of antacids</li> </ul>	<ul style="list-style-type: none"> <li>• Antacids</li> </ul>	<ul style="list-style-type: none"> <li>• Lectures</li> </ul>	<ul style="list-style-type: none"> <li>• Paper-based exams</li> </ul>

8+9	4	<ul style="list-style-type: none"> <li>Miscellaneous inorganic agents</li> </ul>	<ul style="list-style-type: none"> <li>Protective adsorbents</li> <li>Topical agents</li> <li>Dental agents</li> </ul>	<ul style="list-style-type: none"> <li>Lectures</li> </ul>	<ul style="list-style-type: none"> <li>Paper-based Exams</li> </ul>
10-15	12	<ul style="list-style-type: none"> <li>Understanding the concept of radio therapeutics</li> </ul>	<ul style="list-style-type: none"> <li>Radiopharmaceutical preparations</li> <li>Radio opaque and contrast media</li> </ul>	<ul style="list-style-type: none"> <li>Lectures</li> </ul>	<ul style="list-style-type: none"> <li>Paper-based Exams</li> </ul>
1-6	12	<ul style="list-style-type: none"> <li>Acid base reactions</li> </ul>	<ul style="list-style-type: none"> <li>Acid base reactions</li> </ul>	<ul style="list-style-type: none"> <li>Practical</li> </ul>	<ul style="list-style-type: none"> <li>Lab-based unknown and quiz</li> </ul>
7+8	4	<ul style="list-style-type: none"> <li>Assay of sodium benzoate</li> </ul>	<ul style="list-style-type: none"> <li>Assay of sodium benzoate</li> </ul>	<ul style="list-style-type: none"> <li>Practical</li> </ul>	<ul style="list-style-type: none"> <li>Lab-based unknown and quiz</li> </ul>
9+10	4	<ul style="list-style-type: none"> <li>Assay of Borax</li> </ul>	<ul style="list-style-type: none"> <li>Assay of Borax</li> </ul>	<ul style="list-style-type: none"> <li>Practical</li> </ul>	<ul style="list-style-type: none"> <li>Lab-based unknown and quiz</li> </ul>
11+12	4	<ul style="list-style-type: none"> <li>Assay of citric acid</li> </ul>	<ul style="list-style-type: none"> <li>Assay of citric acid</li> </ul>	<ul style="list-style-type: none"> <li>Practical</li> </ul>	<ul style="list-style-type: none"> <li>Lab-based unknown and quiz</li> </ul>
13+14	4	<ul style="list-style-type: none"> <li>Assay of magnesium hydroxide</li> </ul>	<ul style="list-style-type: none"> <li>Assay of magnesium hydroxide</li> </ul>	<ul style="list-style-type: none"> <li>Practical</li> </ul>	<ul style="list-style-type: none"> <li>Lab-based unknown and quiz</li> </ul>
15	2	<ul style="list-style-type: none"> <li>Assay of ammoniated mercury</li> </ul>	<ul style="list-style-type: none"> <li>Assay of ammoniated mercury</li> </ul>	<ul style="list-style-type: none"> <li>Practical</li> </ul>	<ul style="list-style-type: none"> <li>Lab-based unknown and quiz</li> </ul>

#### 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)	Block, Roche Soine and Wilson, Inorganic Medicinal and Pharmaceutical Chemistry, 1986
Main references (sources)	Wilson and Gisvold Textbook of Organic medicinal and Pharmaceutical chemistry, Delgado JN, Remers WA, (Elsevier, 12th edition, 2010)  Laboratory Handbook for Practical Inorganic Pharmaceutical Chemistry adopted by department.
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	