Course Description Form

1. Course Name:
Pharmaceutical Technology I (Theoretical+ Practical)
2. Course Code:
Phind25 314--
3. Semester / Year:
1st Semester/3rd year
4. Description Preparation Date:
01/9/2025
5. Available Attendance Forms:
Students' signature on attendance sheet
6. Number of Credit Hours (Total) / Number of Units (Total)
3 hours Theoretical + 2 hours Practical (75) /4 units
7. Course administrator's name
Theoretical
Name: Assistant professor Dr. Mohanad Alfahad Email: dr.ma.alfahad@uomosul.edu.iq Name : Assis. Professor Ghayth Abdulrazzaq Email: ghayth.abdulrazzaq@uomosul.edu.iq
Practical
Name: Assis. Lec. Noora Thamer Email: noora.aldabbagh88@uomosul.edu.iq
8. Course Objectives
Course Objectives To teach theoretical bases for the technology of preparing different dosage forms with respect to their raw materials, compositions, methods of preparation, stability, storage and uses
9. Teaching and Learning Strategies

Strategy	Lecturing Seminars Homework Quiz Practical laboratory demonstrations

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3+2	A1: Define Preformulation A2: List the tests required to do the preformulation and how to interpret their results	Preformulation	Theoretical lectures. Laboratory experiments	Paper-based exams
2	3+2	A1: Define solubility and describe how different factors increase or decrease	Solubility: Factors affecting solubility expression of dissolution; dissolut rate versus solubilit	Theoretical lectures. Laboratory demonstration.	Paper-based exams

		solute solubility in a given solvent.	preparation of solutic containing non-volat materials.		
3	3+2	B2: Compare and contrast liquid dosage forms to traditional oral dosage forms.	Official solutic classification official solutic preparation and use	Theoretical lectures. Laboratory demonstration.	Paper-based exams
4	3+2	B2: Compare and contrast liquid dosage forms to traditional oral dosage forms.	Aqueous soluti containing aroma principles; aroma waters; methods preparations; stabil	Theoretical lectures. Laboratory demonstration.	Paper-based exams
5	3+2	B2: Compare and contrast liquid dosage forms to traditional oral dosage forms.	Syrups: sugar ba syrups; artificial sorbitol based syru stability of syrups.	Theoretical lectures. Laboratory experiments.	Paper-based exams
6	3+2	C2: Evaluate and select a proper solvent and delivery system for a given solute, purpose, and/or patient population	Preparation of solutions using mix solvent systems; spirits, and elixirs.	Theoretical lectures. Laboratory demonstration.	Paper-based exams
7	3+2	C2: Evaluate and select a proper solvent and delivery system for a given solute, purpose, and/or patient population	Extraction; maceration and percolation.	Theoretical lectures. Laboratory demonstration.	Paper-based exams
8	**Mid-term exam**				
9	3+2	C2: Evaluate and select a proper solvent and delivery system for a given solute, purpose, and/or patient population	Tinctures; fluid extracts; extracts resins and oleoresins.	Theoretical lectures. Laboratory demonstration.	Paper-based exams
10	3+2	A1: Define clarification process and explain its essential elements	Definition and methods of clarification; filte aids in clarificatic	Theoretical lectures. Laboratory demonstration.	Paper-based exams
11	3+2	A2: Differentiate between a suspension, an emulsion, a gel, and a magma	Dispersed system their classificatio comparisons between different systems.	Theoretical lectures. Laboratory demonstration.	Paper-based exams
12	3+2	A1: Define and differentiate the following terms from one another:	Colloidal dispersions; lyophilic; lyophobic.	Theoretical lectures.	Paper-based exams

		Lyophobic, Lyophilic, Hydrophobic, Hydrophilic, Amphiphilic		Laboratory demonstration.	
13	3+2	A1: Define suspension and explain its advantageous and disadvantages	Coarse dispersion suspensions.	Theoretical lectures. Laboratory demonstration.	Paper-based exams
14	3+2	A2: Identify the desired features in a suspension and explain how these benefit patient administration. B2: Explain the role of suspending agents when added to a dispersion medium	Coarse dispersion suspensions.	Theoretical lectures. Laboratory demonstration.	Paper-based exams
15	**Students' seminars**				

11. Course Evaluation

- 20 M Theoretical assessment;
  (paper-based mid-term exam + quiz + attendance + seminar)
- 20 M practical assessment (attendance + quiz + practice)
- 60 M paper-based theoretical final exam

100 M total

12. Learning and Teaching Resources

Required textbooks	1. Ansel's pharmaceutical dosage forms and drug delivery system, Ninth Edition. Aulton's Pharmaceutics The Design a Manufacture of Medicines Sixth Edition
Main references (sources)	1. Encyclopedia of pharmaceuti technology, third edition
Electronic References, Websites	http://www.thepoint.lww.com/Allen9e