Course Description Form

1. Course Name:

Pharmaceutical technology I (Theoretical+ Practical)

2. Course Code:

Phind24 314--

3. Semester / Year:

First semester/3rd year

4. Description Preparation Date:

01/9/2024

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: Sara Taha Ismail
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Practical

Dr. Noora Thamer
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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	Define the various types of oral and topical liquid dosage forms. List the advantages and disadvantages of using liquid dosage forms in extemporaneous compounded prescriptions and in patient therapy.	Solutions and types of solutions	Theoretical lectures. Laboratory experiments	Paper-based exams

2	3+2	Define solubility and describe how different factors increase or decrease solute solubility in a given solvent.	Solubility: Factors affecting solubility expression of dissolution; dissoluti rate versus solubilit preparation of soluti containing non-volat materials.	Theoretical lectures. Laboratory demonstration.	Paper-based exams
3	3+2	Compare and contrast liquid dosage forms to traditional oral dosage forms.	Official solutio classification official solutio preparation and use	Theoretical lectures. Laboratory demonstration.	Paper-based exams
4	3+2	Compare and contrast liquid dosage forms to traditional oral dosage forms.	Aqueous soluti containing aroma principles; aroma waters; methods preparations; stabili	Theoretical lectures. Laboratory demonstration.	Paper-based exams
5	3+2	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	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	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	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	Define clarification process and explain its essential elements	Definition and methods of clarification; filte aids in clarificatio	Theoretical lectures. Laboratory demonstration.	Paper-based exams
11	3+2	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	Define and differentiate the following terms from one another: Lyophobic, Lyophilic, Hydrophobic, Hydrophilic, Amphiphilic	Colloidal dispersions; lyophilic; lyophobic.	Theoretical lectures. Laboratory demonstration.	Paper-based exams
13	3+2	Define suspension and explain its advantageous and disadvantages	Coarse dispersion suspensions.	Theoretical lectures. Laboratory demonstration.	Paper-based exams
14	3+2	Identify the desired features in a suspension and explain how these benefit patient administration. 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

Total 100 M

12. Curriculum update percentage

5 % (cosmetics for use as vehicles: pharmacists are associated with cosmetics throughout history and this had waned in recent years in order to address allergy and to incorporate active medication in cosmetics

13. Learning and Teaching Resources

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