

Course Description Form

1. Course Name:					
Pharmaceutical technology II (Theoretical+ Practical)					
2. Course Code:					
Phind24 329--					
3. Semester / Year:					
Second semester/3 rd year					
4. Description Preparation Date:					
15/1/2025					
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: Sara Taha Ismail Email: seraph.taha@uomosul.edu.iq Fadia Yassir Abdulghani Email: fadiayassir@uomosul.edu.iq					
Practical					
Dr. Noora Thamer Email: noora.aldabbagh88@uomosul.edu.iq Zahraa Hussein Email: zahraa.2021@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; in addition to define and characterize the possible incompatibilities that may occur in dosage forms					
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	Introduction Definition of emulsion Types of emulsion and terminology Classification of emulsions according to -physical state	Emulsion	Theoretical lectures. Laboratory experiments	Paper-based exams

		-route of administration Disadvantage of emulsion Theory of emulsion			
2	3+2	Main properties Types Calculation of concentration of SAA Small Scale Large scale main method of emulsification	Emulsifying agents Methods of preparation of emulsion	Theoretical lectures. Laboratory demonstration.	Paper-based exams
3	3+2	stability of emulsions terms associated with emulsions storage of emulsion preservation	Emulsion	Theoretical lectures. Laboratory demonstration.	Paper-based exams
4	3+2	Definition Advantages Route of administration Site of drug delivery Supp. Shapes Types and example of Suppository Fate of Suppository	Suppositories Inserts	Theoretical lectures. Laboratory demonstration.	Paper-based exams
5	3+2	Ideal properties Types of bases Suppository Molds Determination of the amount of base* Vaginal Inserts* Packaging and Storage*	Suppository Bases Methods of preparation	Theoretical lectures. Laboratory experiments.	Paper-based exams
6	3+2	introduction Ideal properties of ointment base types of ointment bases(USP) comparison between the ointment bases Selection of ideal ointment base	Semisolids	Theoretical lectures. Laboratory demonstration.	Paper-based exams
7	3+2	Preparation of ointment COMPENDIAL REQUIREMENTS FOR OINTMENTS	Semisolids	Theoretical lectures. Laboratory demonstration.	Paper-based exams

		ophthalmic ointment (sterile ointment) Creams (vanishing creams) Definition pastes definition gels definition			
8	Mid-term exam				
9	3+2	Introduction Definition Route of administration Granules Uses of powders Characterization of powders Flowability	Powders and Granules	Theoretical lectures. Laboratory demonstration.	Paper-based exams
10	3+2	Particle size reduction Comminution of drugs Blending of powders Powder papers Medicated powders Route of administration Problems associated with particle size reduction Dispensing of powders Granules	Powders and Granules.	Theoretical lectures. Laboratory demonstration.	Paper-based exams
11	3+2	Definition Advantages of capsules Types of capsules (Shell) Hard gelatin capsules manufacture of hard gelatin shells Preparation of filled hard gelatin capsules	Capsules	Theoretical lectures. Laboratory demonstration.	Paper-based exams
12	3+2	Soft gelatin capsules Enteric coated capsules Counting of capsules Storage of capsules Examples of some official capsules	Capsules	Theoretical lectures. Laboratory demonstration.	Paper-based exams
13	3+2	Pharmaceutical aerosols definition main advantage	Aerosols and Foams	Theoretical lectures. Laboratory demonstration.	Paper-based exams

		components of aerosols and example Pharmaceutical foams definition advantages type of foams and example			
14	3+2	introduction types of incompatibility Physical Incompatibility chemical incompatibility	Pharmaceutic Incompatibili	Theoretical lectures. Laboratory demonstration.	Paper-based exams

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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

About 5 %

13. Learning and Teaching Resources

Required textbooks

1. Ansel's pharmaceutical dosage forms and drug delivery system, 11th Edition.

Main references (sources)

1. Encyclopedia of pharmaceut technology, third edition

Electronic References, Websites

<http://www.thepoint.lww.com/Allen9e>