



Higher Education Institution Performance Review ((Academic .Program Review))

This course description provides a summary of the main characteristics of the course and the learning outcomes expected of the student, demonstrating whether he has made the most of the learning opportunities available and must be linked to the program description

1. Educational Institution	Ministry of Higher Education and Scientific Research / Al-Zahrawi University
2. University Department / Center	College of pharmacy / Pharmaceuticals Branch
3. Course Name / Code	Pharmaceutical Technology lab II / PPCT 36
4. Programs in which it is included	Bachelor of Pharmacy
5. Available Forms of Attendance	Daily attendance
6. Semester / Year	2025-2026 / second course / third stage
7. Total Number of Study Hours	30 hours practical
8. Date of preparing this description	2026
9. Course Objectives:	
The student is taught the basic principles of preparing different dosage forms according to their raw materials, contents, preparation methods, stability, storage and uses, in addition to defining and studying any change in characteristics and properties in the event of an incompatibility between the materials in the pharmaceutical dose.	
1. Learning Outcomes, Teaching and Learning Methods, and Evaluation	

A. Knowledge and Understanding

1. Enabling students to have comprehensive knowledge of the concepts of different pharmaceutical doses and enabling them to acquire and understand the methods of preparing them in small scales in the laboratory and pharmacy.
2. Enabling students to identify the theoretical technological rules used in preparing pharmaceutical doses according to their raw materials, contents, preparation methods, stability, storage and uses.

B. Subject-Specific Skills

١. Enabling students to acquire the skills of preparing medicine according to the medical conditions diagnosed by the doctor.
٢. Enabling students to possess the skills of preparing different drug doses.
٣. Enabling students to possess the skills of storing medicines after completing their preparation.

Teaching and Learning Methods

١. Using the smart board.
٢. Conducting practical experiments
3. Writing scientific reports related to practical experiments

C. Evaluation Methods

1. Midterm and final exams
2. Quizzes
3. Small group discussions
4. Practical report evaluation
5. Class activities (posters)

D. Thinking Skills

1. Show educational videos about the given material and use visual education.
2. Use modern methods in preparing lectures and presenting them in PowerPoint format

e. General and Transferable Skills

1. Planning and implementing laboratory experiments using modern equipment and devices
2. Analyzing, interpreting and evaluating experimental data in experimental measurements
3. Acquiring skill in using the computer
4. Giving confidence to the student through presenting scientific research

11. Course Structure					
Evaluation Method	Learning Methods	Unit Name / Course or Topic	Required Learning Outcomes	Hours	Week
Daily written examinations and oral examinations	Using the smart board and conducting scientific experiments	Emulsion	Introduction Definition, Types, Classification of emulsions, Disadvantage of emulsion, Theory of emulsion	۲	۱
Daily written examinations and oral examinations	Using the smart board and conducting scientific experiments	Suppository	Ideal properties Types of bases, Suppository Molds,	۲	۲
Daily written examinations and oral examinations	Using the smart board and conducting scientific experiments	Semisolids	Preparation of ointment	۲	۳
Daily written examinations and oral examinations	Using the smart board and conducting scientific experiments	Semisolids	Preparation of cream	۲	۴
Daily written examinations and oral examinations	Using the smart board and conducting scientific experiments	Semisolids	Preparation of gel	۲	۵
Daily written examinations and oral examinations	Using the smart board and conducting scientific experiments	Semisolids	Preparation of emulgel	2	۶
Daily written examinations and oral examinations	Using the smart board and conducting scientific experiments	Powders	Preparation of powder	۲	۷
Daily written examinations and oral examinations	Using the smart board and conducting scientific experiments	Granules	Preparation of granules	۲	۸
Daily written examinations and oral examinations	Using the smart board and conducting scientific experiments	Capsules	Definition, advantages, types, hard gelatin capsules, shell composition, properties, manufacturing of hard capsules Hard Preparation offilled hard gelatin capsules	۲	۹

Daily written examinations and oral examinations	Using the smart board and conducting scientific experiments	Aerosols and Foams	Pharmaceutical aerosols: Definition advantages & components of an aerosols Pharmaceutical Foams: definition, advantages & types	2	١٠
Daily written examinations and oral examinations	Using the smart board and conducting scientific experiments	Pastes	Pastes: Preparation techniques and quality evaluation	2	١١
Daily written examinations and oral examinations	Using the smart board and conducting scientific experiments	Incompatibility	Types of incompatibility: physical incompatibility, chemical incompatibility	2	١٢
Daily written examinations and oral examinations	Using the smart board and conducting scientific experiments	shampoo	Preparation techniques and quality evaluation	2	13
Daily written examinations and oral examinations	Using the smart board and conducting scientific experiments	Effervescent Granules	Problems associated with particle size reduction, Medicated powders, Dispensing of powders, Granules & Effervescent	2	14
Daily written examinations and oral examinations	Using the smart board and conducting scientific experiments	soap	Soap Preparation techniques and quality evaluation	2	15

12. Course Evaluation

The grade is distributed out of 20 according to the tasks assigned to the student, such as daily preparation, daily, oral, daily and written exams, writing scientific reports for laboratories, etc.

13. Learning and teaching resources

Required books	Ansel's pharmaceutical dosage forms and drug delivery 10th Edition by Loyd Allen (Author)
Main References (Sources)	- American Pharmacy. - Aulton's Pharmaceutics: The Design and Manufacture of Medicines, 3ed Michael E. Aulton (Author). Churchill, Livingstone- Elsevier

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