



Course Description for Industrial Pharmacy- Practical- fifth Year First Semester

Performance review of higher education institution (assessment of the academic program)

Course Description

This course description summarizes the key characteristics and anticipated learning objectives for students, assessing their utilization of available learning resources, and must be aligned with the program description.

1. Educational Institution	Ministry of Higher Education and Scientific Research / Al-Zahrawi University
2. University Department / Center	College of Pharmacy
3. Course Name / Code	Industrial Pharmacy Practical - Fifth Stages PPCT59
4. Programs in which it is included	Bachelor of Pharmaceutical Sciences
5. Available Forms of Attendance	Daily attendance
6. Semester / Year	Fifth Stage -first Course
7. Total Number of Study Hours	30 hours per Course
8. Date of preparing this description	2025-2026
9. Course Objectives: The course aims to achieve the following: 1- Study the methods of manufacturing different pharmaceutical forms 2- Identify the methods of evaluating medicines and ensuring their effectiveness and medical impact on the human body 3- Emphasize the importance of packaging and filling processes on different pharmaceutical forms.	

10. Learning Outcomes, Teaching and Learning Methods, and Evaluation:

A. Knowledge and Understanding

- 1- The student should be familiar with the skills that must be acquired in the field of work, such as manufacturing and marketing medicines.
- 2- The student should be familiar with the most important methods of manufacturing pharmaceutical forms.
- 3- The student should be familiar with the most important methods of evaluating and ensuring the efficiency of the produced pharmaceutical forms.
- 4- Preparing trained and qualified cadres to work in laboratories and pharmaceutical companies.

Subject-Specific Skill

1. Teaching skill in the specialty subject.
2. The student should have knowledge of the additives that should be used to produce pharmaceutical forms in addition to the active ingredient.
3. The student should have the ability to identify and solve obstacles and problems that may occur in the pharmaceutical manufacturing process

A. Thinking Skills

1. Encourage students to find problems related to the focus of the study
2. Encourage students to find solutions to those problems
3. Conduct experiments individually and collectively.
4. Compare results and explore errors

C. Teaching and Learning Methods

- 1 Explaining the concepts theoretically and applying them practically
2. Discussion and dialogue method.
3. Troubleshooting and correcting them.
4. Study circles

D. Evaluation methods

1. Submit weekly reports and work in the laboratory.
2. Oral assessment and practical performance evaluation.
3. Written tests

D. General and Transferable Skills

1. The student should be able to think logically to solve problems
2. The student should acquire manual work skills
3. The student should acquire development and creativity skills

Course Structure/ 5 TH STAGE/ 1 ST semester					
Weeks	Hours	Required Learning Outcomes	Unit Name / Course or Topic	Learning Methods	Evaluation Method
1	2	Knowledge	Direct compression method for preparation of tablets.	Using the Blackboard and Display Screen	Daily Exam and Oral Questions
2	2	Knowledge	Direct compression method for preparation of tablets.	Using the Blackboard and Display Screen	Daily Exam and Oral Questions
3	2	Knowledge	Wet granulation method for preparation of tablets.	Using the Blackboard and Display Screen	Daily Exam and Oral Questions
4	2	Knowledge	Wet granulation method for preparation of tablets.	Using the Blackboard and Display Screen	Daily Exam and Oral Questions
5	2	Knowledge	Evaluation of tablets.	Using the Blackboard and Display Screen	Daily Exam and Oral Questions
6	2	Knowledge	Evaluation of tablets Part 2	Using the Blackboard and Display Screen	Daily Exam and Oral Questions
7	2	Knowledge	Preparation of capsules	Using the Blackboard and Display Screen	Daily Exam and Oral Questions
8	2	Knowledge	Evaluation of capsules	Using the Blackboard and Display Screen	Daily Exam and Oral Questions
9	2	Knowledge	Sustained release dosage forms: Preparation and characterization	Using the Blackboard and Display Screen	Daily Exam and Oral Questions
10	2	Knowledge	Capsules dosage form: Preparation .and evaluation	Using the Blackboard and Display Screen	Daily Exam and Oral Questions

11	2	Knowledge	Capsules dosage form: Preparation .and evaluation	Using the Blackboard and Display Screen	Daily Exam and Oral Questions
12	2	Knowledge	Accelerated stability testing: effect of temperature and moisture on the stability of pharmaceutical formulations	Using the Blackboard and Display Screen	Daily Exam and Oral Questions
13	2	Knowledge	Calibration curve of salicylic acid	Using the Blackboard and Display Screen	Daily Exam and Oral Questions
14	2	Knowledge	Study the hydrolysis of acetyl salicylic acid solution in phosphate buffer	Using the Blackboard and Display Screen	Daily Exam and Oral Questions
15	2	Knowledge	Study the hydrolysis of acetyl salicylic acid solution in phosphate buffer	Using the Blackboard and Display Screen	Daily Exam and Oral Questions

11. Infrastructure

Required Readings:	1) Aulton's Pharmaceutics; The Design and Manufacture of Medicines; 6th edition, 2022. 2) Pharmaceutical Dosage forms and Drug Delivery Systems by Howard A. Ansel; 11th edition, 2017. 3) Scientific journal and papers related to industrial pharmacy
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Special Requirements (Workshops, Journals, Software, Websites):	Electronic Websites: • https://youtu.be/yoUTuITOnmU
Social Services (Guest Lectures, Professional Training, Field Studies, Others)	Laboratory contribution to students' graduation research

Admission:	
Prerequisites	Admission according to the central plan
Minimum Number of Students	/
Maximum Number of Students	Admission exceeds the capacity plan

Name of the Instructor:
Assistant Lecturer
Attaa Sattar Dawood