



Course Specification

(Bachelor)

Course Title: **Pharmaceutics II**

Course Code: **PHCU 433**

Program: **Pharmaceutical Sciences**

Department: **Pharmaceutics**

College: **College of Pharmacy**

Institution: **Najran University**

Version: **3**

Last Revision Date: 2024/8/21



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A. General information about the course:

1. Course Identification

1. Credit hours: 3 (2+1)

2. Course type

A. ☐ University ☐ College ☐ Department ☐ Track ☒ Program
B. ☒ Required ☐ Elective

3. Level/year at which this course is offered: (7th level/ 4th year)

4. Course general Description:

This course will deal with the formulation, preparation and evaluation of solid dosage form. The following main subject will be covered, tablet, design and manufacturing and evaluation, capsules preparation, evaluation and manufacturing, suppositories dosage forms including preparation and evaluation

5. Pre-requirements for this course (if any):

Pharmaceutics I (PHCU 332)

6. Co-requisites for this course (if any):

None

7. Course Main Objective(s):

The course deals with studying the pharmaceutical concept of the solid dosage forms, its preparation and properties

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	60	100%
2	E-learning		
3	Hybrid <ul style="list-style-type: none"> Traditional classroom E-learning 		
4	Distance learning		

3. Contact Hours (based on the academic semester)





No	Activity	Contact Hours
1.	Lectures	30
2.	Laboratory/Studio	30
3.	Field	
4.	Tutorial	
5.	Others (specify)	
Total		60

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of PLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding			
1.1	Demonstrate the concepts and knowledge of different Solid dosage forms	K1	Lectures	Written exam Assignments
1.2	Demonstrate the understanding related to physicochemical properties of additives/ excipients for the design of specific solid dosage forms	K3	Lectures	Written exam Assignments
...				
2.0	Skills			
2.1	Demonstrate the plan of strategies to design and formulate specific dosage forms for a specific therapeutic effect	S3	Lectures Lab work	Written exam Practical exams Reports
2.2				
...				





Code	Course Learning Outcomes	Code of PLOs aligned with program	Teaching Strategies	Assessment Methods
3.0	Values, autonomy, and responsibility			
3.1	Demonstrate ability to work independently and professionally on related topics	V1	Problem-based learning	Assignments, Observation card
3.2				
...				

C. Course Content

No	List of Topics (Theoretical)	Contact Hours
1	General introduction: pharmaceutical terms and definitions of all solid dosage forms.	2
2	Tablet: advantages, disadvantages, and ideal properties of tablets. Formulation of the tablet.	2
3	Tablet manufacturing methods Tablet compression machine	4
4	Tableting problems	2
5	Quality control of tablets	2
6	Tablet coating: sugar coating, film coating, compression coating. Film defects	4
7	Modified release tablet	4
8	Capsules: introduction, advantages, disadvantages.	2
9	Hard gelatin capsules: formulation, manufacturing, capsule sizes	2
10	Soft gelatin capsules: formulation, manufacturing, capsule filling.	2
11	Suppositories: formulation, manufacturing, and evaluation	4
Total		30





No	List of Topics (Practical)	Contact Hours
1	Introduction.	2
2	Flow Properties-Angle of repose	2
3	Manufacturing of Tablet-Wet granulation	2
4	Manufacturing of tablet-Dry granulation & Direct compression	2
5	Processing of tablet manufacturing- Excipients, Diluents and Binders	2
6	Processing of tablet manufacturing- Disintegrants, Lubricants, Antiadherent , Glidant	2
7	Quality control test of tablet- General appearance & Weight variation	2
8	Quality control test of tablet-Friability test and hardness	2
9	Calculation based on formulation of different dosage form (tablet, suppositories)	2
10	Preparation of Suppositories	6
11	Preparation of tablet	2
12	Revision	4
Total		30

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	midterm exam 1 (theory)	6	20%
2	Quiz (theory)	4	10%
3	Assignment +exploratory report	11	5%
4	Observation card	2-16	5%
5	Practical quiz, and laboratory notebook	2-16	10%
6	Final Practical exam	16	10%
7	Final Written exam	17-19	40%
	Total		100%

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).



E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	Allen L.V., Popovich N. G. and Ansel H. C. Ansel's Pharmaceutical Dosage Forms and Drug Delivery Systems, 12th Edition, 2021, Lippincott Williams & Wilkins
Supportive References	Aulton's Pharmaceutics -The Design and Manufacture of Medicines: Sixth edition, Elsevier publication, 2021
Electronic Materials	https://sdl.edu.sa/SDLPortal/ar/Publishers.aspx http://dlaf.nu.edu.sa/en/e-libraries http://www.nu.edu.sa/en/web/deanship-of-libraries-affairs/85 http://lib.nu.edu.sa/DigitalLibrary.aspx
Other Learning Materials	

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	1. Lecture room equipped with data show and internet and enough seats. 2. Laboratory equipped with health and safety tools, internet, and enough seats
Technology equipment (projector, smart board, software)	Computers, data show, sound systems and internet
Other equipment (depending on the nature of the specialty)	

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Students	Indirect
Effectiveness of Students assessment	Examination committee	Direct
Quality of learning resources	Course coordinator and students	Indirect
The extent to which CLOs have been achieved	Course coordinator	Direct
Other		

Assessors (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify))

Assessment Methods (Direct, Indirect)





G. Specification Approval

COUNCIL /COMMITTEE	PHARMACEUTICS DEPARTMENT COMMITTEE
REFERENCE NO.	14460216-1060-00001
DATE	21/8/2024

