



Course Specifications

Course Title:	Pharmaceutical Dosage Forms-2
Course Code:	PHT 304 (701304-3)
Program:	Doctor of Pharmacy (Pharm D.)
Department:	-
College:	Pharmacy
Institution:	Taif University

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A. Course Identification

1. Credit hours: 3 cr. h
2. Course type
a. University <input type="checkbox"/> College <input type="checkbox"/> Department <input type="checkbox"/> Others <input checked="" type="checkbox"/> Program
b. Required <input type="checkbox"/> Elective <input type="checkbox"/>
3. Level/year at which this course is offered: Level6/Third year
4. Pre-requisites for this course (if any):
5. Co-requisites for this course (if any):

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	30	43 %
2	Blended		
3	E-learning	10	14 %
4	Correspondence		
5	Practical	30	43 %
	Total	70	100 %

7. Actual Learning Hours (based on academic semester)

No	Activity	Learning Hours
Contact Hours		
1	Lecture	30
2	Laboratory/Studio	30
3	Tutorial	-
4	Others (specify)	-
	Total	60
Other Learning Hours*		
1	Study	15
2	Assignments	5
3	Library	10
4	Projects/Research Essays/Theses	5
5	Preparing for Mid-semester exam	7
6	Preparing for practical exam	8
7	Preparing for Final exam	10
	Total	120

* The length of time that a learner takes to complete learning activities that lead to achievement of course learning outcomes, such as study time, homework assignments, projects, preparing presentations, library times

B. Course Objectives and Learning Outcomes

1. Course Description

This course deals with solid dosage form design and testing, provides the students with

various main operations involved in pharmaceutical manufacturing industry including all types of solid dosage forms such as Tablets, capsules, suppositories, Modified release drug delivery systems and aerosols.

2. Course Main Objective

- A. Identification of pharmaceutical solid dosage forms including tablets, suppositories, capsules and also aerosolized dosage forms and various types of modified release DFs commonly prescribed as marketed medicines.
- B. Understanding of manufacturing processes, materials packaging and quality control (QC) testing of Solid dosage forms.

3. Course Learning Outcomes

CLOs		Aligned PLOs
1	Knowledge:	
1.1	Identify the characteristics of solid dosage forms including; tablets, capsules and powders	K2
1.2	Explain the QC tests of solid dosage forms	K2
1.3	Describe different types of modified release dosage forms	K2
1...		
2	Skills :	
2.1	Differentiate between various types of pharmaceutical aerosols	S1
2.2	Select appropriate methods for preparing modified release and fast release dosage forms	S1
2.3	Suggest the possible solutions to deal with tableting and tablet coating problems	S1, S3
2...		
3	Competence:	
3.1	Decide suitability of some MR dosage forms for certain drugs based on their biopharmaceutical properties	C1
3...		

C. Course Content

No	List of Topics	Contact Hours
1	General Introduction to pharmaceutical Dosage Forms (preformulation studies, powder technology)	8
2	Tablet manufacturing methods& machines (1)	4
3	Tablet manufacturing methods& machines (2)	4
4	Tablet manufacturing methods & machines (3)	8
5	Capsules	4
6	Suppositories	8
7	Modified release drug delivery systems (MRDDS)-1	8
8	Modified release drug delivery systems (MRDDS)-2	4
9	Fast Release DDS	4
10	Pharmaceutical Aerosols	8
Total		60

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	Knowledge		
1.1	Identify the characteristics of solid dosage forms including; tablets, capsules and powders	Lecture Group Discussion	Written exam
1.2	Explain the QC tests of solid dosage forms	Lecturing Group Discussion	Written exam
1.2	Describe different types of modified release dosage forms	Lecturing Group Discussion	Written exam
2.0	Skills		
2.1	Differentiate between various types of pharmaceutical aerosols	Lecture Practical sessions	Written exam Practical exam
2.2	Select appropriate methods for preparing modified release and fast release dosage forms	Lecture Practical sessions	Written exam Practical exam
2.3	Suggest the possible solutions to deal with tableting and tablet coating problems	Lecture	Written exam
3.0	Competence		
3.1	Decide suitability of some MR dosage forms for certain drugs based on their biopharmaceutical properties	Lecture Research Project	Presentation
3.2			
...			

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Quiz 1	4 th W	10 %
2	Assignment-1	6 th W	5 %
3	Mid-semester exam	9 th W	20 %
4	Assignment-2	12 th W	5 %
5	Practical exam	15 th W	20 %
6	Final exam	16 th W	40 %
7	Total		100 %

*Assessment task (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :

The responsible teaching staff member for boys section (Dr. Ahmed M. Abdelhaleem) is available during office hours (4h/week) office No. B 039 second floor on Sunday (10:00 am-12:00 pm) and Tuesday (12:00-2:00 pm)

For girls section (Dr. Hadeel Abo-elenin) is available is available during office hours (4h/week) office No. 2131 on Monday (10:00 am-12:00 pm) and Tuesday (10:00 am-12:00 pm)

Communication with students is also available on Black Board electronic system

F. Learning Resources and Facilities

1. Learning Resources

Required Textbooks	Aulton ME, Taylor KM, editors. Aulton's Pharmaceutics E-Book: The Design and Manufacture of Medicines. Elsevier Health Sciences; 2017. Remington JP. Remington: the science and practice of pharmacy. Lippincott Williams & Wilkins; 2006.
Essential References Materials	Electronic lectures on the blackboard electronic learning system https://lms.tu.edu.sa/webapps/login/#global-nav-flyout
Electronic Materials	British Pharmacopoeia: https://www.pharmacopoeia.com/ United States Pharmacopoeia: http://www.usp.org/
Other Learning Materials	- Saudi digital library: http://apps.tu.edu.sa/sdl/default.aspx

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	Classroom with 60 seats Pharmaceutical formulation Laboratory with Glassware,
Technology Resources (AV, data show, Smart Board, software, etc.)	Data show projector white board Marker pen Eraser
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	The following machines should be available Tableting machine, suppositories molds, Sieving machine, Friabilator, and tablet hardness tester

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching	Students	Indirect: Course evaluation survey
Effectiveness of assessment	Exam Standards Committee Students	Direct: Review of blue print Indirect: Course evaluation survey
Course Learning outcomes	Course coordinators	Direct: Results of exam questions
Quality of learning resources	Students/Staff members	Indirect: Laboratory and library evaluation surveys

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)

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

Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	College board
Reference No.	Number 7
Date	31-March 2019