

## Course Specification

*For Guidance on the completion of this template, please refer to of Handbook 2  
Internal Quality Assurance Arrangements*

Institution : King Saud Riyadh University
College of Pharmacy /Department of Pharmaceutics

### A Course Identification and General Information

1. Course title and code:	<b>Pharmaceutics-2 (PHT 311)</b>
2. Credit hours :	<b>3 (2+1)</b>
3. Program(s) in which the course is offered. (If general elective available in many programs indicate this rather than list programs)	<b>Doctor of Pharmacy</b>
4. Name of faculty member responsible for the course :	
5. Level/year at which this course is offered	<b>Level 5</b>
6. Pre-requisites for this course (if any)	<b>PHT 210, PHT 221</b>
7. Co-requisites for this course (if any)	<b>None</b>
8. Location if not on main campus	<b>NA</b>
9. course language :	<b>english</b>

## B Objectives

<p>Summary of the main learning outcomes for students enrolled in the course.</p> <ol style="list-style-type: none"> <li>1- Knowledge regarding the different pharmaceutical forms of the solid and semi-solid products.</li> <li>2- Methods for the preparation and manufacture of solid and semi-solid pharmaceutical products.</li> <li>3- Knowledge regarding the advantages and disadvantages of the solid and semi-solid pharmaceuticals</li> <li>4- Understanding of the roles of each non-active ingredient in the different dosage forms</li> <li>5- Knowledge regarding the influence of solid and semi-solid pharmaceutical products on the bioavailability and effectiveness of the drugs .</li> <li>6- Grasping of the pharmaceutical and non-pharmaceutical methods available to control the quality of the drugs.</li> </ol>
<p>2. Briefly describe any plans for developing and improving the course that are being implemented. (eg increased use of IT or web based reference material, changes in content as a result of new research in the field)</p> <ol style="list-style-type: none"> <li>1- Study of and resolution of the problems that face the students during the study of the course</li> <li>2- Revision of the course contents and its modernization.</li> </ol>

## C. Course Description (Note: General description in the form to be used for the Bulletin or Handbook should be attached)

This course deals with the principles and techniques involved in the formulation and preparation of semisolid and solid dosage forms with brief introduction to the quality control of these preparations. The following main subjects are going to be covered : ointments, creams, gels, pastes, powders, effervescent granules, tablets, capsules, and suppositories.

Topics to be Covered (lectures)		
Topic	No of Weeks	Contact hours
1- Ointments, creams, gels, pastes.	3	6
2- Powders, effervescent granules,	2	4
3- Tablets	5	10
4- Capsule	2.5	5
5- Suppositories	1.5	3

Topics to be Covered (practically in laboratory)		
Topic	No of Weeks	Contact hours
1- Ointments, creams, gels, pastes.	3	9
2- Powders, effervescent granules,	2	6
3- Tablets	3	9
4- Capsule 5	2	6
5- Suppositories	2	6
6- exams	2	6

2 Course components (total contact hours per semester): hours			
Lecture: 28	Tutorial:	Practical/Fieldwork /Internship: 36 hours Practical Exam 6 hours	Other: report submission

3. Additional private study/learning hours expected for students per week. (This should be an average :for the semester not a specific requirement in each week)

**28 hours / semester**

4. Development of Learning Outcomes in Domains of Learning

For each of the domains of learning shown below indicate:

- A brief summary of the knowledge or skill the course is intended to develop;
- A description of the teaching strategies to be used in the course to develop that knowledge or skill;
- The methods of student assessment to be used in the course to evaluate learning outcomes in the domain concerned.

(i) Description of the knowledge to be acquired

1. Knowledge about different dosage forms technology.

2. Interpretation of formulation parameters and dispensing procedure
3. Problem encountered in preparation of semisolids, powders, capsules, tablets and suppositories.
4. Evaluation of dosage forms.
5. Packaging of dosage forms
6. Labelling and instructions to the patients.
7. critical thinking alertness f pretision.

(ii) Teaching strategies to be used to develop that knowledge via:

- 1- Theoretical lectures and practical approaches. experiments
- 2- Tutorial.
- 3- Reports and assignments.

(iii) Methods of assessment of knowledge acquired

- 1- Written quiz, mid term, final exams and practical exams.
- 2- Verbal discussions in groups.
- 3- Evaluation of home assignments.

## **b. Cognitive Skills**

(i) Cognitive skills to be developed

- 1- Critical thinking
2. Critical thinking, and appropriate decision for problems.
3. Alertness about the doses, and compounding of prescriptions.
4. Precision during directions given to patients.

(ii) Teaching strategies to be used to develop these cognitive skills

- 1- Lectures
- 2- Practicals
- 3- reports

(iii) Methods of assessment of students cognitive skills

1. exams : the oretical and fractical.
2. Diswssions during lectures and labs
3. Evaluation of Compounding of medication in lab. will be evaluated.
4. Evaluation of Attitudes of students in lab.
5. Evaluation of Reports.
6. Presentation of selective topics.
7. Assignments requesting feedbacks on issues related and unrelated to the topics.

### **c. Interpersonal Skills and Responsibility**

(i) Description of the interpersonal skills and capacity to carry responsibility to be developed

- 1- Giving group assignments to enhance their abilities to work in groups.
- 2- Communication with instructors, tutors and staff..
3. Communication with different personalities and attitudes.

(ii) Teaching strategies to be used to develop these skills and abilities

- 1- Students will be trained on simulating situations.
- 2- Oral exams will be made.
- 3- Group discussion.
- 4- Group projects will be carried out.

(iii) Methods of assessment of students interpersonal skills and capacity to carry responsibility

- 1- Monitoring of students' attitudes in lectures and labs.
- 2- Participation of students in the community activities.
- 3- Assessment of home assignments and reports.
- 4- Evaluation of the group projects.
- 5- Monitoring the action/reaction of students when entitled to higher responsibilities.

### **d. Communication, Information Technology and Numerical Skills**

(i) Description of the skills to be developed in this domain.

- 1- search utilizing internet to cope with course demand.
- 2- Follow the update knowledge concerning the course demand.
- 3- Presentation using power point.
- 4- Self learning.

(ii) Teaching strategies to be used to develop these skills

- 1- Training on different software and special programs related to the course e.g. labelling of the dosage forms
- 2- Students will be asked to present a research project utilizing the I.T. showing the latest information about certain topics.

(iii) Methods of assessment of students numerical and communication skills

- 1- Evaluation of the extent of comprehension of students in problem salvation via exams.

- 2- Assessment of home assignments.
- 3- The positive role of the student in group projects.
- 4- The effective participation of the student in the activities of his society.

**e. Psychomotor Skills (if applicable)**

N A

(ii) Teaching strategies to be used to develop these skills

N A

(iii) Methods of assessment of students psychomotor skills

N A

5. Schedule of Assessment Tasks for Students During the Semester			
Assessment	Assessment task (e.g. essay, test, group project, examination etc.)	Week due	Proportion of Final Assessment
1	Report- verbal discussion	all	10
2	Midterm I	-7	15
3	Midterm II	13-14	15
4	Practical exam + evaluation	14	20
5	Final exam	16	40

\* Reports will be discussed according to a schedule starting from week 3 till week 10.

#### **D. Student Support**

1. Arrangements for availability of faculty for individual student consultations and academic advice. (include amount of time faculty are available each week)  
Lecture time, office hours and Tutorial hours.  
Officehours 2 hours / week.

#### **E Learning Resources**

##### 1. Required Text(s)

Pharmaceutics the science of dosage form design, (Aulton)  
Ansel's Pharmaceutical Dosage Forms and Drug Delivery, Ansel, H and Popovich, N  
The Theory & Practice of Industrial Pharmacy, Lachman , L. Liberman, H and  
Kanig, J . lipincott (2011)

##### 2. Essential References

1- Remington.the science and practice of pharmacy,pulisher = lipincott (2011).

2-physical pharmauy ly sinko,pj (2010).

##### 3- Recommended Books and Reference Material (Journals, Reports, etc) (Attach List)

The united states Pharmacopea NF  
Journal of American Medical Association (JAMA)  
Saudi Pharmaceutical journal (SPJ)  
International Journal of Pharmaceutics

4-.Electronic Materials, Web Sites etc

[www.emedicine.com](http://www.emedicine.com)

[www.sciencedirect.com](http://www.sciencedirect.com)

[www.blackwell.com](http://www.blackwell.com)

[www.ovid.com](http://www.ovid.com)

[www.pubmed.com](http://www.pubmed.com)

5- Other learning material such as computer-based programs/CD, professional standards/regulations

CD of British Pharmacopeia (B.P), United States Pharmacopeia (USP), British Pharmaceutical codex

(B.P.C). Martindale (extra pharmacopeia). Clinical Pharmacology soft ware.

## **F. Facilities Required**

Indicate requirements for the course including size of classrooms and laboratories (ie number of seats in classrooms and laboratories, extent of computer access etc.)

1. Accommodation (Lecture rooms, laboratories, etc.)

Number of seats in each classroom would be 100 seats.

Number of seats in each laboratory would be up to 25 seats.

2. Computing resources

There are central computer labs in the College building

3. Other resources (specify --eg. If specific laboratory equipment is required, list requirements or attach list)

Analytical balances (one per student) - Shaking water baths (one per 5 students) -

Sonication water baths (one per 5 students) - Sand baths (one per 5 students)- pH

Meters (one per 10 students)- Glass wares( all types and sizes) – Mortars and pestles

(porcelain and glass), one of each type per student.



## **G Course Evaluation and Improvement Processes**

1. Strategies for Obtaining Student Feedback on Effectiveness of Teaching  
Questionnaire is given to students to be filled about course content and teaching procedures.
  - 1-Evaluation of standards of the students in the quizzes, midterm, final exams, and home assignments, reports, and presentation.
  - 2-evaluation of the course ly studens .
- 2 . Other Strategies for Evaluation of Teaching by the Instructor or by the Department  
Verbal discussion should be done by the staff member in presence of students about course content and teaching procedures in order to express the extent of comprehension and under standing.
  - 1-Listening to students, complaints.
  - 2-diswssin of the course liy the department counail.
- 3 Processes for Improvement of Teaching
  - 1-Visiting to factory of medicated dosage forms, Video illustration for formulation of dosage forms
  - 2-staff training
4. Processes for Verifying Standards of Student Achievement (eg. check marking by an independent faculty member of a sample of student work, periodic exchange and remarking of a sample of assignments with a faculty member in another institution)  
Comparis on of the students results in the mid-and final-exams.
5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement.  
Establishing an academic committee in the department to control:  
Periodical reviewing of the course content, midterms , final exams, students' complaints , time factor, discipline, attendance of students and tutors.