

## Course Syllabus Typical Format (CSTF)

### First: Course Card:

1	Faculty: <b>Pharmacy</b>	2	Department: <b>Pharmaceutics</b>
3	Semester: <b>First Semester</b>	4	Academic year: <b>1447 H</b>
5	Course: <b>Pharmaceutical Calculations</b>	6	Course code and number: <b>PDPH 0211</b>
7	Credit hours: <b>2 hours</b> (1 Theory & 2 Tutorial)		
8	Prerequisite (Name & code number): Not applicable		
9	Course type: <input checked="" type="checkbox"/> Compulsory or <input type="checkbox"/> Elective		
10	Course level: <input type="checkbox"/> University requirement, <input checked="" type="checkbox"/> Faculty requirement or <input type="checkbox"/> Department requirement		

### Second: Faculty Member Card:

1	Name: <b>Dr. Mona Kamel</b>		
2	Sections of the course that we teach all the course		
3	Office phone: <b>4006</b>	4	Cell phone (Optional): <b>0548798401</b>
5	Office location and number: <b>Faculty of Pharmacy (01-40-2-105)</b>		
6	Office hours: <b>Tuesday, Wednesday, Thursday (12-1 PM)</b>		
7	Website: <a href="https://www.ut.edu.sa/ar/Staff/Pages/default.aspx?EmpNum=PDmB%2bgOFx861YFfoP3arCg%3d%3d">https://www.ut.edu.sa/ar/Staff/Pages/default.aspx?EmpNum=PDmB%2bgOFx861YFfoP3arCg%3d%3d</a>		
8	E mail: <a href="mailto:mqushawy@ut.edu.sa">mqushawy@ut.edu.sa</a>		

### Third: Schedule of Lectures & Labs:

Section	Days	Time	Location (Building / Hall)
Female	Thursday	10AM -12 PM	<b>01-40-1-057</b>
	Thursday	1-2 PM	<b>01-40-1-057</b>

#### Fourth: Course description:

##### Course description as stated in the Faculty or University guide (In Arabic and English):

This course will provide an integrated approach to the fundamentals of pharmaceutical calculations. Attention will also be given to the basic math concepts that are utilized in the daily pharmacy practice. Measurement systems and their units will also be covered in the course.

صمم مقرر الحسابات الصيدلانية ليمد الطلاب بالمعلومات والأدوات اللازمة لإجراء العمليات الحسابية الصيدلانية اليومية. كما يهدف المقرر أيضا الي إمداد الطلاب بالمهارات والمعلومات اللازمة لتفسير وحساب الوحدات الصيدلانية المختلفة المستخدمة في الوصفات الطبية.

#### Fifth: General course aims:

##### General course aims:

1. To demonstrate basic math concepts, basic pharmacy math and community pharmacy math.
2. To define the concept of pharmaceutical calculations and practice solving problems that arise in daily pharmacy practice.
3. To demonstrate different arithmetic operations used to compound different pharmaceutical preparations.

##### Knowledge & Understanding:

Define the various strategies used for dosage calculations in various pharmaceutical dosage forms and for various groups of patients.

##### Skills:

Evaluate scientific and professional literature critically to be utilized in problem solving.  
Construct numerical calculations.

##### Values:

Plan effective time management schedules for delivering duties and activities on time.

#### Sixth: Units schedule, topics, goals and temporal distribution of course during the semester:

Week No.	Units		Aims	Readings		Keywords
	Unit No.	Title of the unit		Reference No.	Pages	
1	1	Basics of pharmaceutical calculations	- Introduce the general objective of the course and its content - Introduce the schedule and the rule in the classes -Introduce basics of pharmaceutical calculations.	1	9-78	Calculations, Roman numbers, Arabic numbers, decimal
2	2	Pharmaceutical units and concentration expression	-Introduce different methods to express drug concentration	1	472-485	Percentage, weight in volume, weight in weight, volume in volume.

3-4	3-4	Units of measurement	Different units of measurements for weight, length and volume	1	551-564	Apothecary, House-Hold, Metric systems
5	<b>اليوم الوطني</b>					
6	6	Calculating dosages when giving medications in tablet or capsule form.	- Learn how to calculate dosage for medications given orally.	1	Different chapters	- Tablets, capsules, syrup, solution, oral
7	7	Parenteral Dosage Calculations.	- Dosage calculations for parenteral dosage forms	1	107-134	- IV, IM, SC
8	8	<b>Mid-term exam</b>				
9	9	1- Concentrated and diluted solutions. 2- Alligation methods.	- How to dilute a drug concentration of a given strength	1	147-170	Dilution, concentration, Alligation.
10	10	Strategies for solving calculation problems.	Different methodology to solve problems.	1	437-446	Insulin, international units
11	11	Strategies for solving calculation problems.	Different methodology to solve problems.	1	437-446	Insulin, international units
12	12	Factors determining doses for pediatric and elderly patients.	- Learn how to calculate dosage for pediatric and elderly patients.	1	423-436	pediatric and elderly patients
13	13	Calculate doses based on factors of age, body weight, and body surface area.	-Learn how to calculate dosage based on factors of age, body weight, and body surface area.	1	205-234	Age, body weight and body surface area.
14	14	<b>اجازة منتصف الفصل الدراسي الاول</b>				
15	15	Calculation of infusion rate	-Calculation of infusion rate	1	539-549	Drop rate, infusion rate.
16	16	Calculation of infusion rate	-Calculation of infusion rate	1	539-549	Drop rate, infusion rate.
17	17	<b>Tutorial exam</b>				
18	18	<b>Final exam</b>				
19	19	<b>Final exam</b>				
20	20	<b>Final exam</b>				

### Seventh: References and readings:

1	<p><b>Reference (by full documentation authentication system in the scientific field):</b></p> <ol style="list-style-type: none"> <li>1. Pharmaceutical Calculations, SEAN E. PARSONS, Parsons Printing Press.</li> <li>2. Pharmaceutical Calculations, HOWARD C. Ansel, Lippencott Wiliams and Wilkins.</li> <li>3. MCQ in pharmaceutical Calculations, Rayan F. Donnelly Johanne Barry, Pharmaceutical press.</li> </ol>
<p><b>Additional resources of readings with documented source (book, Website, studies, working papers, etc....)</b></p>	

### **Eighth: Professor Policy in dealing with the students in the framework of laws and regulations and FAQ**

1	Delay for attendance: University rules will be applied.
2	Cheating & Plagiarism: University rules will be applied.
3	Absenteeism: University rules will be applied.
4	Delay in providing the duties: 5% of the activity mark will be reduced for each day delay.
5	Checkout during the lecture: Allowed after permission.
6	Accommodation to sit inside the hall classroom: Allowed any place in the lecture room.
7	Failure to submit the exam on time: University rules will be applied.
8	The use of mobile devices: Prohibited
9	Eating & drinking: Prohibited
10	Talking during the lecture: Prohibited

### **Ninth: Evaluation and Exams Calendar:**

Evaluation tool	Dates and duration	Scientific material involved in the Exam	Questions type	Marks out of 100	Guidelines & instructions
First Quiz	Fourth week	Lectures 1-3	Problem-solving	2 marks	Solve pharmaceutical calculation problems, choose the most appropriate answer.
Mid-term exam	Eighth week	Lectures 1-5	Problem-solving, MCQ	30 marks	Multi-format exam including Solve pharmaceutical calculation problems, choose the most appropriate answer.
Second Quiz	Twelfth week	Lectures 8-10	Problem-solving	3 marks	Solve pharmaceutical calculation problems, choose the most appropriate answer.
Tutorial exam	Sixteenth week	All tutorial lessons	Problem-solving, MCQ	20 marks	Solve pharmaceutical calculation problems.

Final exam	Eighteenth week		Problem-solving, MCQ	40 marks	Multi-format exam including pharmaceutical calculation problems, and choose from multiple answers.
Assignment		During the whole semester	Report with pre-announced criteria of judgment	5 marks	To be given as a document with rubrics of how to judge the report and at certain deadline