

Course Syllabus Typical Format (CSTF)

First: Course Card:

1	Faculty: Pharmacy	2	Department: Pharmaceutics
3	Semester: First Semester	4	Academic year: 1444 H
5	Course: Pharmaceutical Calculations	6	Course code and number: PDPH 0211
7	Credit hours: 2 hours (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: Dr. Ghareb Soliman		
2	Sections of the course that we teach all the course		
3	Office phone: 3894	4	Cell phone (Optional):
5	Office location and number: First floor		
6	Office hours: Tuesday (10.00-12.00 am)		
7	Website: http://www.ut.edu.sa/ar/web/u58077		
8	E mail: gh.soliman@ut.edu.sa		

Third: Schedule of Lectures & Labs:

Division number	Days	Time	Location (Building / Hall)
Division 1 (PDPH211)	Thursday	9-10	01-03-0-07
	Thursday	10-12	01-03-0-07

Fourth: Course description:

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

Pharmaceutical calculations course aims at introducing the basics of pharmaceutical calculations used in everyday pharmacy tasks. It also aims at providing pharmacy students with the knowledge and skills needed to carry out interpretation and calculations of different units used in prescriptions.

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. Introduce the students to some basic math concepts, basic pharmacy math and community pharmacy math .
2. Let students understand the concept of pharmaceutical calculations and practice solving problems that arise in daily pharmacy practice.
3. The course also aims at making the students familiar with the different arithmetic operations used to compound different pharmaceutical preparations.

Knowledge & Understanding:

1. Describe different measurement systems used in pharmacy.
2. List different units of household, metric and apothecary systems.
3. Carry out conversions between units of different systems.
5. Describe different methods used to express drug concentration in various pharmaceutical preparations.

Intellectual skills:

1. Summarize units of different measurement systems.
2. Explain different methods used to express drug concentration.
3. Explain dilution and concentration of pharmaceutical preparations.
4. Summarize different methods used to express concentration of oral, parenteral and topical preparations.

Professional and practical skills:

1. Prepare the student to carry out all interpretations and conversions found in prescriptions.
2. Demonstrate ability to understand relations between different measurements systems used in pharmaceutical calculations.
3. Illustrate the basic skills to calculate dosage and concentration in different pharmaceutical dosage forms.

General and transferable skills:

1. Illustrate the ability to read and interpret prescriptions.
2. Demonstrate the communication skills with the physicians and patients.

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	<ul style="list-style-type: none"> - Introduce the general objective of the course and its content - Introduce the schedule and the rule in the classes 	1	9-78	Calculations, Roman numbers, Arabic numbers, decimal

			-Introduce basics of pharmaceutical calculations.			
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	5	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
6	6	Parenteral Dosage Calculations.	- Dosage calculations for parenteral dosage forms	1	107-134	- IV, IM, SC
7	7	1- Concentrated and diluted solutions. 2- Alligation methods.	- How to dilute a drug concentration of a given strength	1	147-170	Dilution, concentration, Alligation.
8	8	Mid-term exam				
9	9	Strategies for solving calculation problems.	Different methodology to solve problems.	1	437-446	Insulin, international units
10	10	Strategies for solving calculation problems.	Different methodology to solve problems.	1	437-446	Insulin, international units
11	11	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
12	12	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.
13	13	Calculation of infusion rate	-Calculation of infusion rate	1	539-549	Drop rate, infusion rate.
14	14	Tutorial exams				
15	15	Final exams				

Seventh: References and readings:

1	<p>Reference (by full documentation authentication system in the scientific field):</p> <p>1. Pharmaceutical Calculations, SEAN E. PARSONS, Parsons Printing Press, 2012. How can I get the reference? http://pharmaceuticalcalculations.org</p> <p>2. Pharmaceutical Calculations 15th edition (2016), by Ansel PhD, Howard C. (Author), Stockton PhD RPh, Shelly Janet Prince (Author). How can I get the reference?</p>
---	---

www.amazon.com

Additional resources of readings with documented source (book, Website, studies, working papers, etc....)

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	Ninth week	Lectures 1-7	Problem-solving, MCQ	30 marks	Multi-format exam including Solve pharmaceutical calculation problems, choose the most appropriate answer.
Second Quiz	Fifteenth week	Lectures 8-10	Problem-solving	3 marks	Solve pharmaceutical calculation problems, choose

					the most appropriate answer.
Tutorial exam	Seventeenth week	All tutorial lessons	Problem-solving, give definitions	20 marks	Solve pharmaceutical calculation problems and define/complete pharmaceutical terms.
Final exam	Eighteenth week		Problem-solving, MCQ, short essays	40 marks	Multi-format exam including pharmaceutical calculation problems, choose from multiple answers and write short essays.
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