Philadelphia University	PHILADELPHIA UNIVERSITY THE WAY TO THE FUTURE	**Approved Date: 10/2022**
Faculty:pharmacy		**Issue:1**
Department:		**Credit Hours:1**
Academic Year:2022-2023	**Course Syllabus**	**Bachler:**

Course Information

Course No.	Course Title	Prerequisite
0520225	**Physical pharmacy lab**	**0510123**

Course Type	Class Time	Room No.
☐ Univirsity Requirement ☐ Fuclty Requirement ■ Major Requirement ☐ Elective ■ Compulsory	**Sunday:8.15-10:00** **Monday,Tuesday,Wednsday:2.15-4**	**515**

Instructure Information

Name	Office No.	Phone No.	Office Hours	E-mail

Course Delivery Method

☐ Blended	☐ Online	■ Physical
Learning Model		
Percentage	**Synchronous**	**Asynchronous**	**Physical**
		100%

Course Description

At this level, the student will be familiar with the basics of physical pharmacy like solubility, diffusion, etc.… This knowledge is important to understand the pharmaceutical dosage forms regarding their physicochemical aspects, simple formulation, compounding, procedures. Detailed examples and applications are given at the end of each experiment.

Course Learning Outcomes

Number	Outcome		Corresponding Program Outcomes
Knowledge		**Corresponding competency**	
K1	Acquire knowledge in Physical principles of states of matter and phase rule.	C1	**Kp1**
K2	To develop knowledge of the fundamental physicochemical properties of different states of matter and asses their role and applications in dosage forms.	C1	**KP1**
K3	Illustrate Solubility and Distribution Phenomenon and apply them in the pharmaceutical practices.	C1	**KP1**
K4	Understand the different modes of drug decomposition and their effects on drug stability	C5	**KP5**
Skills			
S1	Analyze problems regarding the phase equilibria, solution and solubility, colligative properties.	C8	**SP2**
S2	Correlate permeability and diffusion properties of drug material to bioavailability	C13	**SP7**
S3	Interact efficiently with others and Work effectively in a team.	C12	**SP6**

Learning Resources

Course Textbook	Physical pharmacy laboratory manual
Supporting References	**Martin's Physical Pharmacy and Pharmaceutical Sciences**By : Patrick J. Sinko**,** Lippincott Williams & Wilkins , 2017, 7th Edition
Supporting Websites	
Teaching Environment	☐ **Classroom** ■ **laboratory** ☐ **Learning Platform** ☐ **Other**

Meetings and Subjects Time Table

Week	Topic	Learning Method*	Task	Learning Material
1	Safety rules	Lecture and practical work		
2	Phase diagram of binary system	Lecture and practical work	Lab report	manual
3	Ternary system phase diagram	Lecture and practical work	Lab report	manual
4	Solubility enhancement	Lecture and practical work	Lab report	manual
5	Distribution of iodine between two immiscible phases	Lecture and practical work	Lab report	manual
6	Rate and order of reaction	Lecture and practical work	Lab report	manual
7	Effect of temperature on reaction rate constant	Lecture and practical work	Lab report	manual
8	Surface tension and CMC	Lecture and practical work	Lab report	manual
9	Mid exam			
10	Diffusion of salicylic acid through polymeric membrane	Lecture and practical work	Lab report	manual
11	Adsorption isotherm	Lecture and practical work	Lab report	manual
12	**Final Exam**			

*Includes: lecture, flipped Class, project based learning, problem solving based learning, collaboration learning.

Course Contributing to Learner Skill Development

Using Technology
Use the calculator and excel to calculate a lot of parameters needed in many equations
Communication Skills
Interact efficiently with others and work effectively in a team.
Application of Concept Learnt
the students will be also exposed to the concepts of solubility, drug release, drug dissolution, and zero and first order decomposition reactions of drugs

Assessment Methods and Grade Distribution

Assessment Methods	Grade	Assessment Time (Week No.)	Course Outcomes to be Assessed
Reports	**% 30**	**From week 4 to 11**	**S1,S2,S3**
Quizez	**% 20**	**Week 3, 4 and 5**	**K1,K2,K3,K4**
Final Exam	**% 50**	**12th week**	**K1,K2,K3,K4**
Total	**%100**		

* Include: quizzes, in-class and out of class assignment, presentations, reports, videotaped assignment, group or individual project.

Alignment of Course Outcomes with Learning and Assessment Methods

Number	Learning Outcomes	Corresponding competency	Learning Method*	Assessment Method**
Knowledge				
K1	Acquire knowledge in Physical principles of states of matter and phase rule.	C1	Lectures and practical work	Quizez, exams.
K2	To develop knowledge of the fundamental physicochemical properties of different states of matter and asses their role and applications in dosage forms.	C1	Lectures and practical work	Quizez, exams.
K3	Illustrate Solubility and Distribution Phenomenon and apply them in the pharmaceutical practices.	C1	Lectures and practical work	Quizez, exams.
K4	Understand the different modes of drug decomposition and their effects on drug stability	C5	Lectures and practical work	Quizez, exams.
Skills				
S1	Analyze problems regarding the phase equilibria, solution and solubility, colligative properties.	C8	Lectures and practical work	Reports, prarctical work
S2	Correlate permeability and diffusion properties of drug material to bioavailability	C13	Lectures and practical work	Reports, prarctical work
S3	Interact efficiently with others and Work effectively in a team.	C12	Lectures and practical work	Reports, prarctical work

*Include: lecture, flipped class, project based learning, problem solving based learning, collaboration learning.
** Include: quizzes, in-class and out of class assignments, presentations, reports, videotaped assignments, group or individual projects.

Course Polices

Policy	Policy Requirements
Passing Grade	The minimum pass for the course is (50%) and the minimum final mark is (35%).
Missing Exams	• Anyone absent from a declared semester exam without a sick or compulsive excuse accepted by the dean of the college that proposes the course, a zero mark shall be placed on that exam and calculated in his final mark. • Anyone absent from a declared semester exam with a sick or compulsive excuse accepted by the dean of the college that proposes the course must submit proof of his excuse within a week from the date of the excuse's disappearance, and in this case, the subject teacher must hold a compensation exam for the student. • Anyone absent from a final exam with a sick excuse or a compulsive excuse accepted by the dean of the college that proposes the material must submit proof of his excuse within three days from the date of holding that exam.
Attendance	The student is not allowed to be absent more than (15%) of the total hours prescribed for the course, which equates to two laboratories. If the student misses more than (15%) of the total hours prescribed for the course without a satisfactory or compulsive excuse accepted by the dean of the faculty, he is prohibited from taking the final exam and his result in that subject is considered (zero), but if the absence is due to illness or a compulsive excuse accepted by the dean of the college that The article is introduced, it is considered withdrawn from that article, and the provisions of withdrawal shall apply to it.
Academic Integrity	Philadelphia University pays special attention to the issue of academic integrity, and the penalties stipulated in the university's instructions are applied to those who are proven to have committed an act that violates academic integrity, such as cheating, plagiarism (academic theft), collusion, intellectual property rights.

Program Learning Outcomes to be Assessed in this Course

Number	Learning Outcome	Course Title	Assessment Method	Targeted Performance level

Description of Program learning Outcomes Assessment Method

Number	Detailed Description of Assessment

Assessment Rubric of the Program Learning Outcomes
