

Philadelphia University	 PHILADELPHIA UNIVERSITY <small>THE WAY TO THE FUTURE</small>	Approved Date:
Faculty:		Issue:
Department:		Credit Hours:
Academic Year:		Course Syllabus

Course Information

Course No.	Course Title	Corequisite	
0510427	Industrial pharmacy Practical	Industrial pharmacy (0510426)	
Course Type		Class Time	Room No.
<input type="checkbox"/> University Requirement <input type="checkbox"/> Faculty Requirement <input type="checkbox"/> Major Requirement <input type="checkbox"/> Elective <input checked="" type="checkbox"/> Compulsory		wednesday 2:15-4.00	5503

Instructure Information

Name	Office No.	Phone No.	Office Hours	E-mail
Dr Mohammad Bayan	5532	+962263 7444 Ext.: 2227	12:30 13:30 Sun, Tue 13:00- 14:00 Mon, Wed	mbayan@philadelphia.edu.jo
Pha. Yasmeeen Darwish	5615	Ext.: 2173	12:00-1:30 Sun-Wed	ydarwish@philadelphia.edu.jo

Course Delivery Method

<input type="checkbox"/> Blended <input type="checkbox"/> Online <input checked="" type="checkbox"/> Physical			
Learning Model			
Percentage	Synchronous	Asynchronous	Physical
			100%

Course Description

This course is complementary part to the theoretical lectures provided by the co-requisite course Industrial pharmacy. This course is designed to give the student a detailed knowledge concerning powders used in pharmaceutical formulations including: powder mixing, milling, characterization of flowability, compressibility and particle size analysis, in addition to granulation of powders as one of the main prerequisite steps for tablet compression.

Course Learning Outcomes

Number	Outcome	Corresponding Program Outcomes	Corresponding Competencies
Knowledge			
K1	Gain knowledge to operate equipments used in unit operations and granulation methods in formulation of solid dosage forms	K_P 1 & K_P 6	C₁, C₆
K2	Recognise role of different excipients added to granules prior to compression	K_P 1 & K_P 6	C₁, C₆
Skills			
S1	Practice operating equipments used in unit operations and granulation during formulation of solid dosage forms	S_P 2	C₈
S2	To be able to adapt and accommodate team working	S_P 6 S_P 8	C₁₂, C₁₄
S3	Identify problems arising from performing certain unit operations and granulation of powders	S_P 2	C₈
S4	Perform calculation and able to analyse collected data	S_P 6	C₁₂

Learning Resources

Course Textbook	Manual of Industrial pharmacy practical from the University Bookshop.
Supporting References	<ul style="list-style-type: none"> • Aulton's Pharmaceutics: The Design and Manufacture of Medicines, Edit.: Michael E. Aulton and Kevin M. G. Taylor. Pub.: Churchill Livingstone, 4nd edition, 2013. ISBN: 978-0- 7020-4290-4 • Electronic database of practical courses • The Theory and Practice of Industrial Pharmacy by Leon Lachman, Herbert A. Lieberman, Joseph L. Kanig. 3rd edition (August 1986), Lea & Febiger; ISBN: 0812109775
Supporting Websites	http://library.philadelphia.edu.jo/st_en.htm
Teaching Environment	<input type="checkbox"/> Classroom <input checked="" type="checkbox"/> laboratory <input type="checkbox"/> Learning Platform <input type="checkbox"/> Other

Meetings and Subjects Time Table

Week	Topic	Learning Method*	Task	Learning Material
1	Vision and Mission of faculty of pharmacy Course Syllabus Introduction to safety rules	lecture		Vision and Mission of Faculty of Pharmacy Course syllabus
2	Particle size analysis	Flipped class Problem solving based learning	Report	Manual
3	Size reduction.	Flipped class Problem solving based learning	Report	Manual
4	Solid- solid mixing	Flipped class Problem solving based learning	Report	Manual
5	Characterization of flow properties of powders	Flipped class Problem solving based learning	Report	Manual
6	Improvement of powder flowability	Flipped class Problem solving based learning	Report Home work	Manual
7	Granulation	Flipped class Problem solving based learning	Homework	Manual
8	Lab off due to Mid exam			
9	Characterization of granules.	Flipped class Problem solving based learning	Report	Manual
10	Effect of additives on properties of granules	Flipped class Problem solving based learning	Outclass Assignment	Manual
11				
12	Practical examination			
13	Final Examination			

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

Course Contributing to Learner Skill Development

Using Technology
<ul style="list-style-type: none"> • Using Excel to construct tables and plots • Operating equipment of unit operations in formulation of solid dosage forms in addition to granulation equipment
Communication Skills
<ul style="list-style-type: none"> • Writing Reports • Team and group working
Application of Concept Learnt
<ul style="list-style-type: none"> • Practical application of unit operations and granulation during formulation of solid dosage forms

Assessment Methods and Grade Distribution

Assessment Methods	Grade	Assessment Time (Week No.)	Course Outcomes to be Assessed
Reports & out class assignments	% 30	Week 2-7 Week 9-11	K1 & K2 S1 ,S2 , S3 & S4
Quizzes	% 20	Week 3, week 4 week 6, week 9	K1 & K2 S1 , S3 & S4
Practical examination	% 10	Week 12	S1 , S3 & S4
Final Exam	% 40	Week 13	K1 & K2 S1 , S3 & S4
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 competencies	Learning Method*	Assessment Method**
Knowledge				
K1	Gain knowledge to operate equipments used in unit operations and granulation methods during formulation of solid dosage forms	C₁, C₆	Flipped class Problem solving based learning	Reports Quizzes Final Exam
K2	Recognise role of different excipients added to granules prior to compression	C₁, C₆	Flipped class Problem solving based learning	Reports Quizzes Final Exam Out-class Assignments
Skills				
S1	Practice operating equipments used in unit operations and granulation during formulation of solid dosage forms	C₈		Practical exam Final exam Quizzes
S2	To be able to adapt and accommodate team working	C₁₂, C₁₄		Evaluation of group collaboration during experiment
S3	Identify problems arising from performing certain unit operations and granulation of powders	C₈		Outclass assignments Homeworks Final exam Quizzes
S4	Perform calculation and able to analyse collected data.	C₁₂, C₁₅		Reports Quizzes Final Exam Out-class Assignments

*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	<ul style="list-style-type: none"> • 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 six lecture days (n t) and seven lectures (days). 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

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