



The University of Jordan

Accreditation & Quality Assurance Center

COURSE Syllabus

1	Course title	Physical Pharmacy lab
2	Course number	1202236
3	Credit hours (theory, practical)	1 (Practical)
	Contact hours (theory, practical)	3 (Practical)
4	Prerequisites/corequisites	Physical Pharmacy (1202131)
5	Program title	BSc Pharmacy
6	Program code	1202235
7	Awarding institution	The University of Jordan
8	Faculty	Pharmacy
9	Department	Department of Pharmaceutics and Pharmaceutical Technology
10	Level of course	Undergraduate
11	Year of study and semester (s)	Second semester of the 2 th year
12	Final Qualification	Pharmacist
13	Other department (s) involved in teaching the course	NA
14	Language of Instruction	English
15	Date of production/revision	31 January 2016

16. Course Coordinator:

Office numbers, office hours, phone numbers, and email addresses should be listed.

Ebtesam H Al Hawamdeh, BSc, MSc.

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ebtesamalhawamdeh@yahoo.com

Office hours:

Sunday: 11-2

Tuesday: 11-1

17. Other instructors:

Office numbers, office hours, phone numbers, and email addresses should be listed.

1- Dr. Samer abu lateefa

Office .

Phone: Ext.

E-mail:

Office hours to be announced

2- Dr. Lorina Bisharat

Office .

Phone: Ext.

E-mail:

Office hours to be announced

3- Dr. Sharif abdelghany

Office .

Phone: Ext.

E-mail:
Office hours to be announced
4- Dr. Lara Tutunji
Office .
Phone: Ext.
E-mail:
Office hours to be announced.
5- Dr. Alaaldin Alkilany
Office .
Phone: Ext.
E-mail:
Office hours to be announced

18. Course Description:

As stated in the approved study plan.

A practical course in physical pharmacy focusing on observing physicochemical phenomena at work in pharmaceutical dosage forms and systems

19. Course aims and outcomes:

A- Aims:

Successful completion of the course should lead to the following outcomes:

1. To provide students with the practical laboratory skills of physical pharmacy.
2. To demonstrate the effect of the physico-chemical properties phenomena on pharmaceutical systems.
3. To clarify theoretical concepts learned in Physical Pharmacy (1202331).

B- Course Intended Learning Outcomes (ILOs): Upon successful completion of this course students will be able to ...

A. Knowledge and understanding:

The student is expected to know the general laboratory safety and basic techniques.

B. Intellectual skills:(cognitive and analytical):

1. The student is expected to develop the ability to suggest suitable techniques to evaluate some physicochemical properties of drug molecules and dosage forms.
2. The student is expected to interpret scientific data and make sound scientific conclusions

C. Subject-specific skills:

1. The student is expected to learn the use of basic instruments analysis and measurement instruments (Spectrophotometer, analytical balance, etc.).
2. The student is expected to know the measurement units and understand their conversions.
3. The student is expected to handle data in terms of graphical presentation and statistical analysis.

D. Transferable skills:

1. Team work.
2. Use oral communication to effectively transmit ideas and conclusions to a scientific

Program Competencies Achieved:

- 3.1 Identify physiochemical properties of drug substances
- 3.4 Demonstrate the ability to perform pharmaceutical calculations
- 3.8 Demonstrate the ability to perform proper documentation

20. Topic Outline and Schedule:

Topic	Week	Instructor	Achieved ILOs	Evaluation Methods	Reference
1-Orientation (Introduction to general laboratory instruction)	1	Section Instructor	A1, A2,D1	Practical Sessions Evaluation	Laboratory manual
Enthalpy Change of Solution	1	Section Instructor	A1, A2, D1	Practical Sessions Evaluation, Oral discussion, Assignment, and reports	Laboratory manual
Determination of Distribution Coefficient of I ₂ and Stability Constant of I ₂ -KI complex	2	Section Instructor	A1, A2, C1	Practical Sessions Evaluation, Oral discussion and reports	Laboratory manual

Binary Water- Phenol Mixture	3	Section Instructor *	A1, A2, B1, B2, C1, C2, D1,D2	Practical Sessions Evaluation, Oral discussion Reports, and Quizes	Laboratory manual
Ternary Systems	4	Section Instructor *	A1, A2, B1, B2, C1, C2, D1,D2	Practical Sessions Evaluation, Oral discussion and Reports	Laboratory manual
Midterm exam	5				
Workshop, Chemical Kinetics	6	Section Instructor *	A1, A2, B1, B2, C1, C2, D1,D2	Practical Sessions Evaluation, Oral discussion and Reports	Laboratory manual
Transfer of Salicylic acid across Polymeric membrane	7	Section Instructor *	A1, A2, B1, B2, C1, C2, D1,D2	Practical Sessions Evaluation, Oral discussion and Reports, Quizes	Laboratory manual
Transfer of Salicylic acid across Polymeric membrane	8	Section Instructor *	A1, A2, B1, B2, C1, C2, D1,D2	Practical Sessions Evaluation, Oral discussion and Reports	Laboratory manual
Critical Micelle Concentration	9	Section Instructor *	A1, A2, B1, B2, C1, C2, D1,D2	Practical Sessions Evaluation, Oral discussion, Assignment Reports, and Quizes.	Laboratory manual
Solubilization	10	Section Instructor *	A1, A2, B1, B2, C1, C2, D1,D2	Practical Sessions Evaluation, Oral discussion and Reports	Laboratory manual
Adsorption isotherm	11	Section Instructor *	A1, A2, B1, B2, C1, C2, D1,D2	Practical Sessions Evaluation, Oral discussion and Reports	Laboratory manual
Final Exam (practical)	12				
Final Exam (Theoretical)	13				

Section (1, 4, 5, 9, and 16) Instructor: Ebtesam AlHawamdeh.

Section (3) Instructor: Dr. Alaaldin Alkilany and Ph. Rana.

Section (7 and 15) Instructor: Dr. Lara Tutunji and Ph. Rana.

Section (10) Instructor: Dr. Samer abu lateefa and Ph. Rana

Section (8 and 12) Instructor: Dr. Sharif abdelghany and Ph. Mai Alhawamdeh.

Section (11) Instructor: Dr. Lorina Bisharat and Ph.Rana.

21. Teaching Methods and Assignments:

Development of ILOs is promoted through the following teaching and learning methods:

ILO/s	Learning Methods	Evaluation Methods
A1,A2	Practical Sessions (Experiments), Lecturing Oral discussion, Assignment	Student evaluation, reports, and Quizes
B1,B2.	Practical Sessions (Experiments), Lecturing Oral discussion, Assignment	Student evaluation, reports, and Quizes
C1, C2	Practical Sessions (Experiments), Lecturing Oral discussion, Assignment	Student evaluation, reports, and Quizes
D1, D2	Practical Sessions (Experiments), Lecturing Oral discussion, Assignment	Student evaluation, reports, and Quizes

Learning skills:
 1-Critical thinking
 2-Digital literacy
 3-Problem-solving skills
 4-Self-directed learning
 5- Team and group working.
 6- Scientific reasoning
 7- Communication skills

22. Evaluation Methods and Course Requirements:

Opportunities to demonstrate achievement of the ILOs are provided through the following assessment methods and requirements:

- 1-Students reports and assignments
- 2- Evaluation on practical sessions
- 3- Quizzes
- 4- Exams

23. Course Policies:

A- Attendance policies:

Attendance: Mandatory.
First warning – with 1 absences
Last warning – with 2 absences
Failing in the subject – with 3 absences

B- Absences from exams and handing in assignments on time:

Will result in zero achievement unless health report or other significant excuse is documented.

C- Health and safety procedures:

General Laboratory safety Instruction are maintained

D- Honesty policy regarding cheating, plagiarism, misbehavior:

The participation, the commitment of cheating will lead to applying all following penalties together

- 1) Failing the subject he/she cheated at**
- 2) Failing the other subjects taken in the same course**
- 3) Not allowed to register for the next semester. The summer semester is not considered as a semester**

E- Grading policy:

Exams and Quizzes.

Evaluation	10 points
Quizz:	10 points
reports	10 points
Mid Exam:	30 points (10 point theoretical, and 20 points practical)
Final Exam:	40 points (10 point theoretical, and 20 points practical)
Total	100 points

F- Available university services that support achievement in the course:

- 1-Laboratory room,**
- 2- internet classes**

24. Required equipment:

All equipment, glassware, instruments required to perform assigned experiments.

25. References:

A- Required book (s), assigned reading and audio-visuals:

Laboratory Manual (Physical Pharmacy)

B- Recommended books, materials, and media:

- 1-Physical Pharmacy and Pharmaceutical Sciences(Martins, latest edition)**
- 2-British Pharmacopeia**
- 3-United states Pharmacopeia**

26. Additional information:

NA

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Name of Course Coordinator: **Ebtessam Al Hawamdeh**-Signature: ----- Date: Jan, 31, 2016

Head of curriculum committee/Department: ----- Signature: -----

Head of Department: -----Signature: -----

Head of curriculum committee/Faculty: ----- Signature: -----

Dean: ----- -Signature: -----

Copy to:

Head of Department
Assistant Dean for Quality Assurance
Course File