

Ministry of Higher Education and Scientific research



Department of Pharmacy

Paitaxt Technical Institute

Subject: industrial Pharmacy

Course Book – 2st year student

Academic Year: 2018/2019

1. Course name	Analytical and Biochemistry
2. Lecturer in charge	Dr. Anjam Hama Abdalla
3. Department/ College	Pharmacy/ Paitaxt Institute
4. Contact	07501799924
5. Time (in hours) per week	1hours theoretical - 3 hours practical
6. Office hours	3 hours
7. Course code	
8. Teacher's academic profile	Assistant lecturer
9. Keywords	Analytical Chemistry, pharmaceutical chemistry, separation
10. Course overview:	
<p>This course is intended to provide fundamentals of analytical and pharmaceutical chemistry. The first part of the course covers an introduction into measurements in analytical chemistry and a short introduction into methods of chemical analysis including volumetric and gravimetric analysis. The second part provides an introduction to the basic principles of pharmaceutical. Towards the end of the course; the importance of analytical and pharmaceutical chemistry in pharmacy will be covered.</p>	
11. Course objective:	
<p>The goal of this course is to introduce you to the principles of analytical and pharmaceutical chemistry with emphasis on the fundamental methods used for chemical analysis. The focus is on three important aspects: how to design experiments, how to analyze data, and how the tools of measurement work. The objectives of the course are</p> <ol style="list-style-type: none"> 1. Learn how to apply the analytical approach to answer scientific questions. 2. Learn the principles of pharmaceutical chemistry. 3. Understand the principles and use of the instruments of chemical analysis; from basic glassware to modern instruments. 	
12. Student's obligation	
<p>Students are obligated to be prepared for each lecture by reading the relevant reading assignment before class(see the lecture schedule). Students should study the materials and work problems after each lecture as they are meant to reinforce your understanding of the lecture material. Work extra problems for each topic in addition to the assignments. The more problems you practice, the better you will understand the material.</p>	
13. Forms of teaching	
<p>PowerPoint presentation, lecture notes, and white board.</p>	
14. Assessment scheme	
<p>Two exams during the course period: 20%</p> <p>Quiz tests and homework: 5%</p> <p>Practical Course 15%</p> <p>Final Exam: 60% (45% for theoretical and 15% for practical)</p>	

15. Student learning outcome:

On successful completion of the course, students will be able:

1. To develop expertise relevant to the professional practice of pharmaceuticals
2. To develop an understanding of the range and uses of scientific principle in the designing dosage form
3. To provide an understanding of the barrier in the process of dosage form manufacturing
4. Provide information for designing various dosage form.
5. To provide experience in some scientific methods to solve various problems related to dosage form manufacturing
6. To develop skills in the scientific method of planning, developing, conducting, reviewing and reporting experiment.

16. Course Reading List and References:

References

- ▶ Alton's pharmaceuticals (Design and manufacturing of medicine) third Edition.
- ▶ Introduction to pharmaceuticals II 4 th Edition
- ▶ Pharmaceutical preformulation
- ▶ Ansole pharmaceutical drug development
- ▶ www. Google. com

17. The Topics:

Lecturer's name

Course Book

Introduction to pharmaceutical industry	Week1	Dr. Anjam Hama Abdalla
Scientific principle in dosage form designing	Week2	
Pharmaceutical Preformulation	Week3	
solution	Week4	
Suspension and emulsion	Week5	
Powder and granule	Week6	
Drying and Tablet and compaction	Week7	
Modified release per oral dosage form	Week8	
Coating of tablets	Week9	
THE FIRST EXAME	Week10	
Hard gelatin capsule	Week11	
Soft gelatin capsule	Week12	
Pulmonary drug	Week13	
Nasal drug	Week14	
Transdermal	Week15	
Rectal vaginal drug	Week16	
Packs and packaging	Week17	

Product stability	Week18	
Cream and ointment	Week19	
THE SECOND EXAME	Week20	

18. Practical Topics	Week
Introduction to practical pharmaceutical industry	1
Aromatic water	2
Solution	3
Parenteral	4
Ear drops	5
Ophthalmic preparation	6
Suspension	7
Syrups	8
Emulsion	9
Lotion	10
elixir	11
Tablets	12
Capsules	13
Powders	14
Ointments	15
Creams	16
Suppositories	17
shampoo	18
liniment	19
Final examination	20
19. Examinations:	
Will be covered in the lectures	
20. Extra notes:	
21. Peer review	
Curriculum and course scheduling were peer reviewed.	