



**Pharmacy Department**

**Paitaxt Private Institute**

**Subject: Industrial Pharmacy**

**Course Book: 2<sup>nd</sup> stage**

**2<sup>nd</sup> semester**

**Lecturer's name:**

**lect. Tariq Waece Sadeq**

**Academic Year: 2020/2021**



the problem during manufacturing process.

### 11. Course objective:

**First:** students should understand information about different methods and evaluations and solve the problem during manufacturing process.

- **Second:** students should have information about machine and instrument used in lab and manufacture □

- **Third:** students should know information on raw material

- **Fourth:** student should understand various method of medicine manufacturing

### 12. Student's obligation

The role of students and their obligations throughout the academic year comes from Evaluating them through exams, presence and activity in the Lab.

### 13. Forms of teaching

Different forms of teaching will be used to reach the objectives of the course:

- Course book
- Data show and power point.
- Scientific videos.
- Group discussion's.
- Papers for practical work and notes.
- Whiteboard.
- Seminars

### 14. Assessment scheme

First course 25 marks (theoretical 10 marks and practical 10 marks) 5 MARKS ACTIVITY

Second course 25 marks (theoretical 10 marks and practical 10 marks) 5 MARKS ACTIVITY

Final exam 50 marks (Theory 20 marks and Practical 30 marks)

**Theory:** - for each course

Exam 8 marks

Quiz and activity 2 marks

**Total 10 marks**

**Practical:-**for each course

Report 5 marks

Activity 5 marks

Exam 5 marks

**Total 15 marks**

### 15. Student learning outcome:

Pharmacy department students should have information about dosage form of most human organs and physiological effect of some drugs or antibiotic on various organs in human body.

### 16. Course Reading List and References:

1-Text book of Remington the science and practice of pharmacy,22<sup>nd</sup> edition, 2013

2- Leon Lachman , the theory and practice of Industrial pharmacy 1976.

3-pharmaceutical technology Volume 1 theory and practical Sushama Talegaonkar ISBN 81-89747-18-5

17. The Topics:	Lecturer's name
<p><b>1<sup>st</sup> Lecture:</b> Types of mixture,</p> <p><b>2<sup>nd</sup> Lecture:</b> Mixing fluid mixing powder Provision of powder mixture Mechanical mixing powder Mixing of materials semi-solid. Mixing devices, to identify the device, its mode of operation.</p> <p><b>3<sup>rd</sup> Lecture:</b> Evaporation, factors affecting the evaporation, Improve the efficiency of evaporation.</p> <p><b>4<sup>th</sup> Lecture:</b> Filtration, properties and influencing factors.</p> <p><b>5<sup>th</sup> Lecture:</b> Emulsion, Emulsion combination, choose oily selection factors.</p> <p><b>6<sup>th</sup> Lecture:</b> Semi-solid dosage form, the rules to form semi-solid, ointment and creams. Pastes, Gel, eye ointment.</p> <p><b>7<sup>th</sup> Lecture:</b> Pharmaceutical Suspension, composition of suspension.</p> <p><b>8<sup>th</sup> Lecture:</b> Suppositories, prescription dose, therapeutic uses, the basis of types of suppositories, cocoa butter.</p> <p><b>9<sup>th</sup> Lecture:</b> Fluids, factors desalinated theoretical factor Injection solution or infusion, manufacturing steps, quality control.</p> <p><b>10<sup>th</sup> Lecture:</b> Packaging, type of packaging, limits of pharmaceuticals packaging.</p> <p><b>11<sup>th</sup> Lecture:</b> Cosmetics.</p> <p><b>12<sup>th</sup> Lecture:</b> Technique to isolate the microorganisms for the production of antibiotics.</p> <p><b>13<sup>th</sup> Lecture:</b> Antibiotics produced by cetrigene. Antibiotics produced by fungi.</p> <p><b>14<sup>th</sup> Lecture:</b> Methods of production, the effectiveness of antibiotics.</p> <p><b>15<sup>th</sup> Lecture:</b> Final Exam</p>	<p>Tariq W.Sadeq</p>

**18. Practical Topics (If there is any)**

- 1<sup>st</sup> lab.: Evaporation
- 2<sup>nd</sup> lab.: capsule preparation
- 3<sup>rd</sup> lab.: granulation method and preparation
- 4<sup>th</sup> lab.: suspension preparation and evaluation definition, types, methods of preparation
- 5<sup>th</sup> lab.: Emulsion preparation and evaluation
- 6<sup>th</sup> lab.: Semi-solid dosage form ointment and creams preparation and evaluation
- 7<sup>th</sup> lab.: Eye Solution eye drop
- 8<sup>th</sup> lab.: suppositories dose characteristics, main types therapeutic use
- 9<sup>th</sup> lab.: producing antibiotics
- 10<sup>th</sup> lab.: Visiting College of pharmacy
- 11<sup>th</sup> lab.: Visiting Awa medica Industrial Factory
- 12<sup>th</sup> lab.: quality control
- 13<sup>th</sup> lab.: elixir preparation and evaluation
- 14<sup>th</sup> lab.: 2<sup>nd</sup> term exam
- 15<sup>th</sup> lab.: Cosmetic product
- 16<sup>th</sup> lab.: Review
- 17<sup>th</sup> lab.: Final Exam

**19. Examinations:**

**Examples of exams:**

**Theoretical:**

**Q1/ Put later (T) for true and (F) for false sentences . ( 25 mark)**

**1- Equipments are used in the mixing process :**

- A.Turbulent flow.
- B.Air jets
- C.Fluid jets
- D.Baffles
- E.Impeller

**2- Power may be supplied to the fluid mass in by means of an:**

- A. Impeller.
- B. Air stream.
- C. liquid jet.
- D. Baffles.
- E. Air Jets

**Q2/ Enumerate the below mention requirement: 25 mark**

A-Mixing Mechanism in liquid materials?

C-Factor affecting the extraction process?

- a. Nature of the drug
- b. Therapeutic effect
- c. Thermal stability
- d. Solvent characteristics ( volatile / non volatile )
- e. Type of products (conc. /Non conc.)

**Q3/ Answer by short note? (25 mark)**

1- Extraction by Infusion.

**Q4/Mach each one from A class with suitable one in B class? 25 mark**

Class A

Class B

1-Used to mill dry materials and slurried

1- Ball mill

& wet cakes ointments.

2- used for wet or dry material, and sterilized

2-Cutter mill

production of ophthalmic and parentral product.

3-used for material have low milting point

3- Colloid mill

or thermo labile.

4- used to process suspensions and emulsions.

4- Fluid Energy mill

5- Used for tough fibrous materials.

5- Hammer mill

## 20. Extra notes:

non

## 21. Peer review

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After review this course book is v. good and is high quality selected lecture and information is perfect scientifically and academic subject is fulfilled for the pharmacy department student.

Dr. Zana Ahmd Mustafa  
Lecture pharmacy department