



<b>Paramedical program</b>	
<b>Specialization</b>	<b>Pharmacy</b>
<b>Course number</b>	020805131
<b>Course title</b>	<b>Pharmaceutics 1</b>
<b>Credit hours</b>	<b>2</b>
<b>Theoretical hours</b>	<b>2</b>
<b>Practical hours</b>	<b>0</b>



### **Brief Course Description:**

Introduction to pharmaceuticals and its definitions, Drug prescription and its contents, The course study different physical pharmaceutical procedures, biological and dynamical pharmacy.

### **Course Objectives:**

Upon the completion of the course, the student will be able to:

1. Identify pharmacy, scopes of pharmaceutical practice, pharmacist and assistant pharmacist duties.
2. Identify pharmaceutical ethics .
3. Identify parts and components of drug prescription, types and criteria of dispensing.
4. Identify the pharmaceutical procedures.
5. Identify methods of Administration of drugs.
6. Identify drugs pharmacokinetics and biopharmaceutics.

**Detailed Course Description:**

Unit number	Unit name	Unit content	Time needed
1.	<b>Introduction</b>	<ul style="list-style-type: none"> <li>• <b>Definition of :</b> Pharmacy, pharmacist, pharmaceuticals, Medication, controlled Substances, pharmaceutical dosage forms, pharmaceutical preparations.</li> <li>• Pharmacist role in health care</li> <li>• Pharmacist technician role in health care</li> <li>• Types of pharmacy practice setting: (community pharmacy, non institutional ,drug stores, institutional pharmacy such as hospital pharmacies, drug manufacturing, medical representation, academic field , governmental institution)</li> </ul>	
2.	<b>Pharmaceutical ethics and behavioral aspects of pharmacy</b>	<ul style="list-style-type: none"> <li>• Pharmacist and Pharmacist relation</li> <li>• Pharmacist and Patient relation</li> <li>• Pharmacist and Community relation</li> <li>• Pharmacist and Physician relation</li> <li>• Logos of Medical profession</li> <li>• Social and behavioral aspects of pharmacy</li> <li>• General pharmaceutical ethics</li> </ul>	
3.	<b>Dispensing and Prescription.</b>	<ul style="list-style-type: none"> <li>• Definition of prescription.</li> <li>• Types of prescriptions and criteria to dispense it.</li> <li>• The parts of prescription</li> <li>• Abbreviations.</li> <li>• Measures taken to deal with any mistake in any prescription</li> </ul>	
4.	<b>Physical pharmaceutical procedures</b>	<ul style="list-style-type: none"> <li>• Physical procedures: (size reducing, separation, Mixing and homogenization</li> <li>• Pharmaceutical procedures that need heat, cold like (crystallization, lyophylization, drying, melting, evaporation, boiling, viscosity).</li> </ul>	



5.	<b>Pharmaceutical procedures which need solvents</b>	<ul style="list-style-type: none"> <li>• Dissolving :</li> <li>• Methods of dissolving, and types of solvent</li> <li>• Distillation</li> <li>• Extraction</li> <li>• Maceration</li> <li>• Decoction</li> <li>• Percolation</li> <li>• Digestions</li> </ul>	
6.	<b>Biopharmaceutics And pharmacokinetics</b>	<ul style="list-style-type: none"> <li>▪ Definitions.</li> <li>▪ Routes of drug administration.</li> <li>▪ Pharmaceuticals dosage forms.</li> <li>▪ Pharmacokinetics (in brief)</li> <li>▪ Bioavailability, Bioequivalence,</li> <li>▪ pharmaceutical equivalence.</li> </ul>	

**Evaluation Strategies:**

	<b>Exams</b>	<b>Percentage</b>	<b>Date</b>
	Mid Exam	40%	--/--/----
	Final Exam	50%	--/--/----
	Homework and Projects Discussions and lecture Presentations	10%	--/--/----



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**Teaching language:**

- English

**Teaching Methodology:**

- Lectures

**Text Book and References:**

1. Pharmaceutical practice , A.J. Winfield, R.M.E. Richards, 3d. edition, 2005, Churchill Livingstone
2. Remington ,The science and practice of pharmacy 21<sup>st</sup> edition,2004, Lippincott William & Wilkens
3. British Pharmacopoeia 2008, British pharmacopoeia Commission, TSO.
4. L V Allen, N G Popovich, H C Ansel, Ansel's Pharmaceutical dosage forms & Drug Delivery Systems, 9th edition, 2nd Indian reprint, 2011, Published by Lippincott Williams and Wilkins, Wolters Kluwer (India) Pvt. Ltd., New Delhi.
5. The pharmacy technician work book & certification , Perspective press ,2<sup>nd</sup> edition 2004, Morton publishing company.
6. The Science of dosage form design, Edin burgh, 2002, New Yourk, Churchill Livingston