



<b>Pharmaceutics-I</b>	
<b>Title:</b> Pharmaceutics-I	
<b>Subject Code:</b> 213 PHT	
<b>Semester:</b> Fourth Semester (second year).	
<b>Duration:</b> 2 + 1 Units (4 contact hours) per week.	
<b>Aims:</b> This course is designed to impart a fundamental knowledge on calculation and formulating different dosage forms. It prepares the students for most basics of the applied field of pharmacy.	
<b>Objectives:</b> At the end of the course the student should be able to do different pharmaceutical calculation, design and formulate different types of dosage forms and select proper excipients.	
<b>Contents:</b>	
<b>Lectures:</b>	
<ul style="list-style-type: none"><li>• <b>Introduction to Dosage Forms:</b> Classification of solids, semisolids and liquid dosage forms, conventional and novel delivery systems.</li><li>• <b>Prescriptions:</b> Reading and understanding of prescriptions, modern methods of prescribing and common Latin abbreviations.</li><li>• <b>Pharmaceutical Calculation:</b> Posology, Latin terms, calculation of doses for infants, adults and elderly patients; Enlarging and reducing recipes percentage solution, allegation, alcohol dilution, proof spirit displacement value of suppositories.</li><li>• <b>Powders and Granules:</b> Types of powders, their merits and demerits, classification of powders, compounding, storage and packaging of powders requiring special consideration like effervescent powders, bulk powders, dusting powders,</li></ul>	



insufflations, dentifrices and cachets.

- **Pharmaceutical Additives:** Diluents, vehicles, bases, solvents, organoleptic additives, surfactants, polymers and their applications.
- **Monophasic Liquid Dosage Forms:** Study of Monophasic liquids like gargles, mouth washes, Throat paint, Ear drops, Nasal drops, Liniments and lotions, Enemas and collodions.
- **Biphasic Liquid Dosage Forms: Emulsions** – Definition, types and identification tests, merits and demerits, uses and classification of emulsifying agents and preparation and stability of emulsions. **Suspensions** – Definition, types, merits and demerits, use of suspending agents, flocculated and deflocculated suspensions, formulation and stability of suspensions.
- **Semi-Solid Dosage Forms: Ointments:** Classification of ointments and ointment bases. Factors governing selection of an ideal ointment base, preparation, packaging, labeling and storage of ointments. **Pastes, Jellies, Poultices:** Formulation. **Suppositories and Pesseries:** Types, suppositories bases, displacement value, preparation, packaging, labeling and storage.
- **Extraction & Galenicals:** Extraction processes, study of infusion, decoction, digestion, percolation, maceration and their modifications, applications in the preparation of tinctures and extracts, factors affecting selection of extraction process.
- **Incompatibilities:** Introduction, classification and methods to overcome the incompatibilities.

**Practical:**

Preparation of following classes of products involving the use of calculations in



metrology (at least 2 products from each category wherever applicable): Aromatic waters, injections, solutions, spirits, glycerine, syrups, elixirs, lotions, mucilages and liniments, emulsions, suspensions, suppositories and powders.

**Minimum course requirements:** 30 (2 x 15) Unit lectures and 30 practical hours (2 x 15) per level.

**Evaluation methods:**

-Quizzes	10%
- Mid term examination	25%
- Practical examinations	25%
- Final examination (written)	40%

**Text Books (latest editions):**

- 1- Pharmaceutical Dosage Forms and Drug Delivery Systems, Ansel H.C., Allen, L.V. and Popovich, Williams and Wilkins.
- 2- Pharmaceutical Dosage Forms: Disperse Systems, Herbert A. Lieberman.

**Recommended books (latest editions):**

- 1- Pharmaceutics: the Science of Dosage Form Design, Aulton, M.E.
- 2- Churchill Living Stone.
- 3- Pharmaceutical Calculations, The Pharmacist's Handbook, Ansel.
- 4- James Swarbrick and James C. Boylan: Encyclopedia of pharmaceutical Technology, Vol.12,- Prescribing of Drugs - pp-443-464, Marcel Dekker Inc. New York.
- 5- N.K.Jain and S.N.Sharma: The theory and practice of Professional Pharmacy
- 6- Cooper and Gunn's: Dispensing Pharmacy
- 7- S.J Carter: Tutorial Pharmacy

**Kingdom of Saudi Arabia  
Ministry of Education  
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المملكة العربية السعودية  
وزارة التعليم  
جامعة جازان  
كلية الصيدلة

8- Remington's Pharmaceutical Sciences (Latest Edition).