

Subject Code: 1PH1010402	Subject Title: Dispensing Pharmacy II and Pharma Industrial Management
Pre-requisite Subject	- NONE -

Objectives of course:

To learn the possible incompatibilities in various preparation and its remedies, detailed information regarding topical preparation and also fundamental principle of management along with marketing and salesmanship.

Learning outcomes:

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

1. Students will learn different incompatibility with their remedy for effective health care management.
2. To explain and apply the basic concepts of preparation, packaging and labeling of different pharmaceutical dosage forms such as ointments, creams, gels and suppositories etc.
3. To get familiar with pharmaceutical industrial management and can understand pharmaceutical marketing.
4. To get sufficient knowledge about importance of sales promotion in pharmaceutical industry.

Teaching Scheme (Hours per week)				Evaluation Scheme (Marks)					
Lecture	Tutorial	Practical	Credit	Theory(T)		Practical(P)		Total Marks	
				University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	Theory	Practical

Subject Contents			
Sr. No.	Topic	Total Hours	Weight (%)
1	Principles involved and procedures adopted in dispensing of a) Semisolid Products – Ointment, Creams, Gels, Pastes b) Suppositories – Bases, Dispensing, Displacement value etc.	8	18
2	Incompatibilities a) Physical, chemical and therapeutic incompatibilities observed in prescriptions of dispensed products b) Identification and correction of incompatibilities. c) Inorganic incompatibilities including incompatibility of metals and their salts, non metals, acids, alkalis. Organic incompatibilities: purine bases, alkaloids, ammonium compounds, carbohydrates, glycosides, anaesthetics, surface active agents.	14	31
Pharma Industrial Management			
3	Concept of Management Administrative management: Planning, Organizing, Staffing, Directing and Controlling. Entrepreneurship Development and Operative Management, Personnel, Materials, Production, Financial Marketing, Time/Space Margin / Morale. Principles of Management Co-ordination, Communication, Motivation, Decision-Making, Leadership, Innovation, Creativity, Delegation of Authority / Responsibility,	12	27

	Record keeping.		
4	Pharmaceutical marketing Functions, buying, selling, transportation, storage, finance, insurance, feedback, information, channels of distribution, wholesale, retail departmental store, multiple shops and mail order business.	7	15
5	Salesmanship Principles of sales promotion, advertising, ethics of sales merchandising.	4	9

List of Experiments: (45 hours)

Practical exercises should be based on theoretical topics. The practical should broadly cover the following:

1. Practicals may be designed to solve a Physical incompatibilities(e.g. immiscibility, insolubility and liquidification)
2. Practicals may be designed to solve Chemical incompatibilities of alkaloidal salt with alkali substance, soluble iodides, Tannins and salicylates, Iron, CO₂.
3. Chemical incompatibilities of soluble salicylates with alkali, acid and ferric salt.
4. Incompatibility of potassium chlorate with oxidizable substances and incompatibility causing evolution of gas (e.g. boric acid with sodium bicarbonate and glycerine, bismuth subnitrate with sodium bicarbonate)
5. To prepare and dispense Pastes (e.g. Zinc Gelatin Paste, Compound zinc oxide Paste, Zinc and Salicylic acid Paste, Compound aluminium Paste etc.)
6. To prepare and dispense jellies (e.g. Sodium Alginate, Zinc gelatin jelly and Lubricating jelly).
7. To prepare and dispense suppositories (Tannic acid suppositories, Phenol suppositories, Ichthamol suppositories with Cocoa Butter, Cocoa Butter suppositories containing insoluble solid (boric acid), Cocoa Butter suppositories containing soluble solid (chloral hydrate)
8. To prepare and dispense Glycerol – gelatin suppositories with macrogols base (Suppository of Eucalyptus Oil, Zinc Oxide – Glycerogelatin suppository, Soap-Glycerin Suppository etc).

List of References:

Reference Books:

1. Cooper and Gunn's , Dispensing for pharmaceutical students, Edited by S. J. Carter
2. John M., Keith W., Christopher A., Dawn B., Pharmaceutical Compounding and Dispensing, published by Pharmaceutical Press, 2010.
3. Stocklosa M. J. and Ansel H.C., Pharmaceutical Calculations, published by Waverly Pvt. Ltd., New Delhi.
4. Howard C. Ansel, Lippincott Williams and Wilkins., Pharmaceutical Dosage forms and Drug delivery systems
5. Langley C.A. and Belcher D., Pharmaceutical Compounding and Dispensing, published by Pharmaceutical Press.
6. Bentley's Textbook of Pharmaceutics, E A Rawlins.
7. Remington: The Science and Practice of Pharmacy, Latest Edition, by Mack Publishing Company.
8. Management by James A.F. Stoner.
9. Statistics for Management by Richard I. Levin.
10. Personnel Management by Arun Monappa.
11. Business Organisation and Office Management by Santhosh Bushan.

Text books:

1. Vidhyasagar G., Pharmaceutical Industrial Management. 2nd Edition, Pharma Med Press.
2. Sanmathi B S and Kalpesh K Mehta, Dispensing Pharmacy: A Practical Manual. Pharma Med Press
3. Mehta R.M., Dispensing Pharmacy, published by Vallabh Prakashan
4. Pawar A., Mordern Dispensing Pharmacy, 4th Edition, Published by Career Publication

e-Resources:

1. <http://www.pharmainfo.net/book/overview-pharmaceutical-marketing-practices-india>
2. <http://notes.tyrocity.com/concept-and-meaning-of-management/>
3. <http://www.yourarticlelibrary.com/management/management-definitions-concept-objectives-and-scope/53128/>
4. <https://open.lib.umn.edu/principlesmarketing/chapter/11-7-sales-promotions/>