



Faculty of Pharmacy
Master of Pharmacy (M. Pharm.)
(W. E. F.: 2023-24)
Document ID: SUTEFPHM-01

Name of Faculty	:	Faculty of Pharmacy
Name of Program	:	Master of Pharmacy (M. Pharm)
Course Code	:	2MPH05
Course Title	:	Pharmaceutics Practical II
Type of Course	:	Pharmaceutics
Year of Introduction	:	2023-24

Prerequisite	:	To have sufficient knowledge about basics of pharmaceutical dosage forms
Course Outcomes	:	Upon successful completion of this course, the students will be able to
	CO1	To prepare various cosmetics products.
	CO2	To evaluate and formulated cosmetic products.
	CO3	To analyse formulated cosmetics products for the various factors that may affect the final formulation.

Teaching and Examination Scheme

Teaching Scheme (Contact Hours)			Credits	Examination Marks				
L	T	P		Theory Marks		Practical Marks		Total Marks
			C	SEE	CIA	SEE	CIA	
0	0	12	6	0	0	100	50	150

Legends: L-Lecture; T-Tutorial/Teacher Guided Theory Practice; P - Practical, C - Credit, SEE - Semester End Examination, CIA - Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.)

List of Experiments

Sr. No.	Name of Experiment	Teaching Hours	Weightage	Mapping with Cos
1	To study the effect of temperature change, nonsolvent addition, incompatible polymer addition in microcapsules preparation	4	2.22%	CO2
2	Preparation and evaluation of Alginate beads	4	2.22%	CO2
3	Formulation and evaluation of gelatin /albumin microspheres	8	4.44%	CO2

4	Formulation and evaluation of liposomes/niosomes	8	4.44%	CO2
5	Formulation and evaluation of spherules	4	2.22%	CO2
6	Improvement of dissolution characteristics of slightly soluble drug by Solid dispersion technique.	4	2.22%	CO2
7	Comparison of dissolution of two different marketed products	8	4.44%	CO2
8	Protein binding studies of a highly protein bound drug & poorly protein bound drug	8	4.44%	CO3
9	Bioavailability studies of Paracetamol in animals.	8	4.44%	CO3
10	Pharmacokinetic and IVIVC data analysis by Winnoline ® software	8	4.44%	CO3
11	In vitro cell studies for permeability and metabolism	8	4.44%	CO3
12	DoE Using Design Expert® Software	12	6.66%	CO3
13	Formulation data analysis Using Design Expert® Software	8	4.44%	CO3
14	Quality-by-Design in Pharmaceutical Development	12	6.66%	CO3
15	Computer Simulations in Pharmacokinetics and Pharmacodynamics.	8	4.44%	CO3
16	Computational Modeling of Drug Disposition	8	4.44%	CO2
17	To develop Clinical Data Collection manual	8	4.44%	CO2
18	To carry out Sensitivity Analysis, and Population	8	4.44%	CO2
19	Development and evaluation of Creams	8	4.44%	CO1
20	Development and evaluation of Shampoo and Toothpaste base	12	6.66	CO2
21	To incorporate herbal and chemical actives to develop	8	4.44%	CO2
22	To address Dry skin, acne, blemish, Wrinkles, bleeding gums and dandruff	16	8.88%	CO2

Suggested Distribution of Theory Marks Using Bloom's Taxonomy						
Level	Remembrance	Understanding	Application	Analyse	Evaluate	Create
Weightage	-	-	-	33.33	33.33	33.33

NOTE: This specification table shall be treated as a general guideline for the students and the teachers. The actual distribution of marks in the question paper may vary slightly from above table.

Major Equipment/Instruments and Software Required

Sr. No.	Name of Major Equipment/ Instruments and Software
1	High Performance Liquid Chromatography (HPLC)
2	Dissolution Apparatus
3	UV- Visible Spectroscopy (UV-Visible)
4	Potentiometer
5	Hardness instrument
6	Disintegration
7	Friability
8	Bulk Density Apparatus
9	Melting Point Instrument
10	Sonicator
11	Centrifuge Spectroscopy
12	Viscometer

Suggested Learning Websites

Sr. No.	Name of Website
1	https://pci.nic.in/pdf/Syllabus_B_Pharm.pdf
2	https://www.aicte-india.org/downloads/bpharma.pdf
3	https://www.ipc.gov.in/
4	https://www.ayush.gov.in/
5	https://ayudmla.gujarat.gov.in/home.php
6	https://www.fda.gov/
7	https://www.pharmacopoeia.com/
8	https://ipapharma.org/
9	https://gpat.nta.nic.in/
10	https://drnaitiktrivedi.com/
11	https://gdc4gpat.com/course/gpat/
12	https://niscpr.res.in/
13	https://delnet.in/
14	https://ihubgujarat.in/
15	https://www.ssipgujarat.in/



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Reference Books

Sr. No.	Name of Reference Books
1	Practical Pharmaceutical Chemistry - Beckett and Stenlake, Vol II, 4th edition, CBS Publishers, New Delhi, 1997.
2	Quantitative Analysis of Drugs in Pharmaceutical formulation - P D Sethi, 3rd Edition, CBS Publishers, New Delhi, 1997.
3	Y W. Chien, Novel Drug Delivery Systems, 2nd edition, revised and expanded, Marcel Dekker, Inc., New York, 1992.
4	N.K. Jain, Controlled and Novel Drug Delivery, CBS Publishers & Distributors, New Delhi, First edition 1997 (reprint in 2001).
5	S.P.Vyas and R.K.Khar, Controlled Drug Delivery - concepts and advances, Vallabh Prakashan, New Delhi, First edition 2002.
6	Theory and Practice of Industrial Pharmacy By Lachmann and Libermann.
7	Pharmaceutical dosage forms: Tablets Vol. 1-3 by Leon Lachmann.
8	Pharmaceutical Dosage forms: Disperse systems, Vol, 1-2; By Leon Lachmann.
9	Physical Pharmacy; By Alfred mart
10	Pharmaceutical Preformulations; By J.J. Wells.