

**BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE-PILANI,  
HYDERABAD CAMPUS  
FIRST SEMESTER 2023-2024**

**Course handout (Part-II)**

Date: 11/08/2023

In addition to Part-I (General handout for all the courses appended to the time table) this portion gives further specific details regarding the course.

**Course No. : PHA F422**  
**Course Title : COSMETIC SCIENCE**  
**Instructor-in-charge : D. Sriram**  
**Lab Instructor : D. Sriram, & others (please refer time table)**

**1) Course description:** Formulation, manufacture, evaluation and packaging of typical cosmetic formulations like creams, powders, lipsticks, hair preparations, dentifrices, etc.

**2) Scope and objective of the course:**

This course intends to familiarize the students with basic principles in design, manufacture quality control and packaging of cosmetic formulations. The course also aims at imparting knowledge on recent advances in field of cosmetic science.

**2a. Course learning outcomes:** On successful completion of this course, students will be able to: Discuss and apply knowledge of the chemistry and function of cosmetic products; Analyse the interaction between skin biochemistry and cosmetic formulations; Analyse and discuss issues of toxicity, skin irritation and allergy in regard to cosmetic formulations; and formulate, produce and critique common cosmetic formulations,

**3) Text book:**

**T:** Mithal, B.M. and Saha, R.N.; Handbook of cosmetic science; Vallabh Prakashan, 2000, 1<sup>st</sup>ed.

**4) Reference books:**

**R1:** Martin M. Rieger; Harry's Cosmeticology, 8<sup>th</sup> Edition, Chemical Publishing Co. Inc, NY. 2009.

**R2:** Barel, AO, Paye, M, Maibach, HI; Handbook of Cosmetic Science and Technology, Informa Health care, 2008.

**5) Course plan:**

a) Lecture wise program:

Lecture No.	Learning objectives	Topics to be covered	Reference* Chapter./Sec.# (Book)
1.	Significance of cosmetics and overview of entire course	Introduction	T-1
2-5	To study various cosmetic ingredients along with its uses	Cosmetic vehicles, Preservatives, colorants, hydrating substances, ceramides, lipids, silicon's, UV filters, skin whitener, surfactants, antioxidants, etc.	R1- 9-17 R2-8, 17-33
6-8	To study Skin fundamentals & Skin disorders and therapies	Skin: Physiology and Penetration Pathways, Drugs used for skin diseases	T-2 R1- 1 R2-2-5
9-21	Manufacture and quality control of skin products	Skin care products, anti-wrinkle products, artificial tanning, skin whitening, anti-cellulite, skin	T-3-6 R1- 18-25 R2-34-48

		cleaning bars, skin cleansing liquids, antiperspirants, deodorants, lipsticks, shaving and after shaving products, talcum powder, face pack/mask, sunscreen lotion etc.	
22-25	To study structure & Disorders of hair, formulations and use of hair care products	Shampoos, conditioner, colorants, depilatory, straightening, waving and other preparations	<b>T-7-13</b> <b>R1- 29-32</b> <b>R2-6, 33, 41</b>
26-28	To study structure & Disorders of nails, formulation and use of manicure products	Nail and manicure preparations: nail lacquers and removing solutions	<b>T-15-17</b> <b>R1- 27-28</b> <b>R2-44</b>
29-32	Preparations for tooth and oral cavity	Dental care products, mouthwashes	<b>T-18-20</b> <b>R1- 33</b> <b>R2-42</b>

**b) Lab Component:**

Name of experiments	No. of practical sessions	Reference* Chapter./Sec.# (Book)
Dispensing of different cosmetic preparations like: after antiperspirants, skin whitening, sun screen tooth paste, face powder, skin moisturizer, nail lacquer remover, hair shampoos, hair, conditioners, body cleanser, depilatory cream, talcum powder and lipsticks	12 [11+1]	# Different chapters of text book # Different sections of R1 and R2

**6) Evaluation scheme:**

Components	Duration	Weightage	Date and time	Remarks
Mid Sem exam	90 minutes	30%	13/10 - 4.00 - 5.30PM	Closed book
Surprise quiz [3-4]	15 minutes each	15%	Class hour	Open Book
Laboratory Component, Lab Assignment	Continuous	15% (10+5)		Open Book
Comprehensive examination	180 minutes	40%	19/12 AN	Closed book

**7) Make-up policy:** Generally, make-up will be considered for regular students only (**80% attendance IN LECTURE CLASSES**).

**8) Chamber consultation hours:** To be announced in class.

**11) Notices:** All the notices pertaining to this course will be displayed in Google class room.

**Academic honesty and integrity policy:** Academic honesty and integrity are to be maintained by all the students throughout the semester and no type of academic dishonesty is acceptable.

**Instructor In-Charge**  
**PHA F422**