

Cosmetic Science

Course Code BP809ET for Eighth Semester Bachelor in Pharmacy

is a comprehensive guide to learn the science behind the cosmetic products used in every day life. From skincare essentials to makeup marvels, this book offers a detailed exploration of the formulation, functionality, and impact of cosmetics on our lives. Through accessible language and engaging examples, it unravels the complex chemistry behind ingredients, manufacturing processes, and product efficacy. From the fundamental chemistry of skincare ingredients to the latest advancements in formulation technology, this book provides readers with a deep understanding of cosmetic product creation and efficacy. From skincare formulations to makeup innovations, each page offers a fascinating glimpse into the intricate science that powers the cosmetics industry. Covering topics such as product development, safety assessment, and regulatory compliance, it offers a holistic view of the cosmetics industry.

This book serves as an ideal text for the eighth semester bachelor in pharmacy students, an indispensable resource for researchers, as well as a handy source of valuable information for others who want to learn more about cosmetics at an introductory level, including the environmental and health concerns.

Preeti MPharm is currently Assistant Professor, Gurugram Global College of Pharmacy, Farruknagar, Gurugram, Haryana. She, as a research scholar, is on a journey of intellectual exploration, delving into the depths of knowledge and contributing to its expansion. With an experience of seven years in teaching and research, she has published many research and review articles in internationally and nationally reputed journals and has authored two books. She is pursuing her PhD from Banasthali University, Aliyabad, Rajasthan. Her research area includes formulation and optimization of lipid-based systems of anti-hypertensive drugs using natural carriers for bioavailability enhancement. Two Indian patents have been credited to her account. She has attended various FDP, conferences, and workshops/webinars organized by APTI and IPGA to enhance her soft skills and knowledge.



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The background of the top section features a collection of white cosmetic products, including bottles, tubes, and a jar, arranged on a light surface. The products are slightly out of focus, creating a soft, professional aesthetic. A decorative vertical bar with thin, parallel lines is positioned on the left side of the page, partially overlapping the text area.

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Preface

The book *Cosmetic Science* is designed specifically as per PCI (Pharmacy Council of India) B. Pharmacy eighth-semester students. The book covers the entire syllabus prescribed by PCI Course Regulation 2014 in a very simple and precise manner to meet the demanding needs of pharmacy aspirants. This book covers wide areas and contains a comprehensive description of the current knowledge of cosmetic science. The book is primarily intended as a textbook for students of pharmacy pursuing degree and masters courses in cosmetology. Being an interdisciplinary subject, it is today covering a wide range of interests both among students, teachers, and industry professionals. Taking this increasing interest into account, this book gives a comprehensive introduction to the subject.

The book contains numerous vivid illustrations, tables, diagrams, and flow diagrams to present the ideas. The distinguishing feature is a summary of all the units at the end of each unit. The structure and content of the book have changed to reflect modern thinking and current university curricula throughout the world. In spite of great care, there might be some mistakes and deficiencies. We will be grateful for suggestions to improve. So go through the content and mail it to us at gbitsian@yahoo.com

**Preeti
Sonia Narwal
Gaurav Agarwal**



Acknowledgments

It is a moment of great pleasure and immense satisfaction for us to express deep gratitude and in humble recognition of the divine guidance and blessings that have illuminated our path throughout the design of this book; we offer our sincerest gratitude to the Almighty.

Firstly, we extend our deepest appreciation to our families and friends for their unwavering support and understanding throughout this endeavour.

I, Preeti, extend my sincere appreciation to the management team of Gurugram Global College of Pharmacy, Farruknagar, Gurugram, Chairman Shri Ravinder Tokas, Principal Dr Indira Raheja and Admissions and Counseling Head Ms Aaruna Yadav for their steadfast guidance and unwavering support.

We, Dr Gaurav Agarwal and Dr Sonia Narwal, would like to extend our heartfelt gratitude to the worthy management of Panipat Institute of Engineering and Technology, Samalkha, Panipat, Chairman Shri Hari Om Tayal, Vice-Chairman Shri Rakesh Tayal, Member Secretary Shri Suresh Tayal, Member BOG Shri Shubham Tayal and Director Dr Shakti Kumar for their constant and unwavering support of my academic pursuits and for fostering an environment conducive to learning and research.

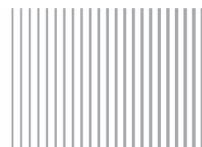
We express our special thanks to Shri Satish K Jain, CMD and gratefulness to Mr YN Arjuna Senior Vice-President—Publishing, Editorial and Publicity, CBS Publishers and Distributors for his sincere efforts.

We are indebted to our mentors, educators, and professors for their dedication to education and for instilling in us a passion for academic excellence in cosmetic science. To all those mentioned above and to the readers of this book, we extend our sincerest thanks for their enduring support and interest in advancing the field of cosmetic science.

**Preeti
Sonia Narwal
Gaurav Agarwal**



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Syllabus
Cosmetic Science (Theory)
Course Code: BP809ET

	45 Hours
UNIT I	10 Hours
Classification of cosmetic and cosmeceutical products.	
Definition of cosmetics as per Indian and EU regulations, Evolution of cosmeceuticals from cosmetics, cosmetics as quasi and OTC drugs.	
Cosmetic excipients: Surfactants, rheology modifiers, humectants, emollients, preservatives. Classification and application.	
Skin: Basic structure and function of skin.	
Hair: Basic structure of hair. Hair growth cycle.	
Oral cavity: Common problem associated with teeth and gums.	
UNIT II	10 Hours
Principles of formulation and building blocks of skin care products: Face wash, Moisturizing cream, Cold cream, Vanishing cream and their advantages and disadvantages. Application of these products in formulation of cosmeceuticals.	
Antiperspirants & deodorants: Actives & mechanism of action.	
Principles of formulation and building blocks of hair care products: Conditioning shampoo, Hair conditioner, anti-dandruff shampoo, Hair oils.	
Chemistry and formulation of para-phenylenediamine based hair dye.	
Principles of formulation and building blocks of oral care products: Toothpaste for bleeding gums, Sensitive teeth, Teeth whitening, Mouthwash.	
UNIT III	10 Hours
Sun protection, Classification of Sunscreens and SPF.	
Role of herbs in cosmetics:	
Skin care: Aloe and turmeric	
Hair care: Henna and amla	



Oral care: Neem and clove

Analytical cosmetics: BIS specification and analytical methods for shampoo, skincream and toothpaste.

UNIT IV

08 Hours

Principles of cosmetic evaluation: Principles of sebumeter, corneometer. Measurement of TEWL, Skin color, Hair tensile strength, Hair combing properties, Soaps, and syndet bars. Evolution and skin benefits.

UNIT V

07 Hours

Oily and dry skin, causes leading to dry skin, skin moisturisation. Basic understanding of the terms comedogenic, dermatitis.

Cosmetic problems associated with hair and scalp: Dandruff, Hair fall causes.

Cosmetic problems associated with skin: Blemishes, wrinkles, acne, prickly heat and body odor.

Antiperspirants and deodorants: Actives and mechanism of action

References

1. Harry's Cosmeticology, Wilkinson, Moore, Seventh Edition, George Godwin.
2. Cosmetics–Formulations, Manufacturing and Quality Control, P.P. Sharma, 4th Edition, Vandana Publications Pvt. Ltd., Delhi.
3. Text book of cosmelicology by Sanju Nanda & Roop K. Khar, Tata Publishers.