

**NIRMA UNIVERSITY**  
**Institute of Pharmacy**

**(B. Pharm)**  
**(Semester - VIII)**

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<b>Course Code</b>	<b>BP809ET</b>
<b>Course Title</b>	<b>Cosmetic Science – Theory</b>

**Course Learning Outcomes (CLO):**

At the end of the course, students will be able to –

1. Define and classify of cosmetic products and excipients
2. Understand the principles of formulation development of skin care products and discuss skin related cosmetic problems (S, E)
3. Discuss the principles of the instruments, BIS specification and analytical techniques for cosmetics (S, E, Ent)
4. Explain the principles of formulation development of hair care products and discuss hair related cosmetic problems (S, E)
5. Describe the formulation development of oral care products (S, E)
6. Apply role of herbs in skin, hair and oral care (S, E)

**Syllabus:**  
**Hours**

**Teaching hours: 45**

**UNIT I**  
**Hours**

**10**

Classification of cosmetic and Cosmeceuticals 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 (S, E)

**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**  
**Hours**

**10**

**Principles of formulation and building blocks of skin care products: (S, E)**

Face wash, Moisturizing cream, Cold Cream, Vanishing cream and their advantages and disadvantages. Application of these products in formulation of Cosmeceuticals.

**Anti-perspirants & deodorants-** Actives & mechanism of action.

**Principles of formulation and building blocks of Hair care products: (S, E)**

Conditioning shampoo, Hair conditioner, anti-dandruff shampoo. Hair oils. Chemistry and formulation of Para-phenylene diamine based hair dye.

**Principles of formulation and building blocks of oral care products:** Toothpaste for bleeding gums, sensitive teeth. Teeth whitening, Mouthwash. (S, E)

### 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, other relevant herbal drugs for hair, skin, oral care

**Analytical cosmetics:** BIS specification and analytical methods for shampoo, skin- cream and toothpaste. (S, E, Ent)

### 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, **Techniques for evaluation of specialized cosmetics.** (S, E, Ent)

### 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 (S, E)

Cosmetic problems associated with skin: blemishes, wrinkles, acne, prickly heat and body odor. (S, E)

Antiperspirants and Deodorants- Actives and mechanism of action (S, E)

#### Tutorials

**Teaching hours: 15 hours**

Tutorials will be based on syllabus

#### Suggested Readings<sup>^</sup>: (Latest Editions)

1. Harry, R. G. (1982). *Harry's cosmeticology*. Chemical Publishing Company.
2. Sharma, P. P. (2008). *Cosmetics: formulation, manufacturing and quality control*. Edn. 4<sup>th</sup>. Vandana.
3. Nanda, S., Nanda, A., & Khar, R. K. (2006). *Cosmetic technology*. Edn. 1st, *Birla Publication.*, Dehli, 7.

L= Lecture, T= Tutorial, P= Practical, C= Credit

<sup>^</sup> this is not an exhaustive list