Course Unit Descriptor

Study Programme: Chemistry

Course Unit Title: Chemistry of Cosmetic Products

Course Unit Code: IHO-407

Name of Lecturer(s): Assistant professor Ksenija Pavlović

Type and Level of Studies: Bachelor Academic Studies

Course Status (compulsory/elective): Elective

Semester (winter/summer): Summer

Language of instruction: English

Mode of course unit delivery (face-to-face/distance learning): Face-to-face

Number of ECTS Allocated: 6

Prerequisites: None

Learning objectives

Introduction to the basic characteristics of the most important raw materials for the production of cosmetic and dermocosmetic products. Introduction to the structure and general characteristics of organic compounds in cosmetics and their chemical transformations. Introduction to the carriers for active ingredients in cosmetics. Gaining knowledge about the safety, stability and efficiency of the active molecules in dermocosmetic and understanding their desirable and undesirable effects. -technology in the cosmetic industry. Getting knowledge about different types of cosmetics and chemical composition of colours and fragrant substances in cosmetology. Introduction and application of nano-technology in the cosmetic industry.

Learning outcomes

Demonstration of acquired knowledge about the structure and properties of compounds that are part of the beauty and dermocosmetic products. Proper application of theoretical knowledge in the design and quality control of cosmetic products. Understanding the influence of the type and characteristics of the raw material on final products. Knowledge about modern production technologies in the cosmetic industry. Precise and accurate application of appropriate experimental techniques in cosmetics preparing.

Syllabus

Theoretical instruction

Introduction to the basic raw materials in cosmetics. Classification of materials according to chemical composition. Characteristics of bioactive substances important for cosmetics. Application of protein, carbohydrates, lipids, vitamins and enzymes in cosmetics. Application and chemical structure of antioxidants, α-hydroxy acids, antiseptics, disinfectants, preservatives, non-steroid hormones, bile acids, saponins and sapogenins. Introduction to the types of cosmetic products: true solutions, colloidal solutions, emulsions, suspensions, gel-type cosmetic preparations, in stick form, aerosols.

Practical instruction

Synthesis of the selected organic compounds that are used in the cosmetic industry. Isolation of active components from selected raw materials. The application of appropriate experimental techniques in preparing cosmetic products.

Required Reading:

1. Weekly teaching load

Weekly Contact Hours: 75	**Lectures:** 30	**Practical work:** 45

Teaching Methods:

Lectures and laboratory work

Knowledge Assessment (maximum of 100 points): 100

Pre-exam obligations	points	**Final exam**	points
Test I and II	30	Written exam	40
Lab exercises	20	Seminar work	10