

Study Programme: Cosmetic technology		
Course Unit Title: Microbiological stability of cosmetic products		
Course Unit Code: SAKI5		
Name of Lecturer(s): Assoc. Prof. Dragoljub Cvetković, PhD; Ass. Prof. Aleksandra Ranitović, PhD		
Type and Level of Studies: Specialist 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: Microbiology		
Course Aims: The aim of the course is to acquire knowledge about modern approach and concept of quality and stability of cosmetic products, as well as knowledge about national and international legislation in the field of quality cosmetic products.		
Learning Outcomes: Students are trained to understand theoretical and practical principles of proactive approach to providing microbial stability and quality of cosmetic products, understanding about the ways of contamination of certain microorganisms which are important for safety and spoilage of cosmetic products, microbial metabolic processes which cause spoilage of the cosmetic products, control of the microbial growth, disinfectants and preservatives, sterilization.		
Syllabus: <i>Theory</i> Theoretical foundation of microorganisms which are important for safety and stability of the cosmetic products. Sources of contamination cosmetic products by pathogenic and non-pathogenic microorganisms, and microbial spoilage of cosmetic products and allergic reactions. Environmental factors and their influence to the growth of microorganisms. Antimicrobials agents and their effectiveness. The resistance of microorganisms to the antimicrobial agents. Hygiene of equipment, air and people. Cleaning and disinfection - implementation and monitoring of sanitation, cleaning and disinfection program. Preservatives. Tests for microbial safety and stability of cosmetic products. Good manufacturing and hygiene practices in the cosmetic industry. Hazard analysis and identification of critical control points of the process. <i>Students research paper</i> Searching of scientific and technical literature, processing, analysis and discussion of the latest findings according to stability and safety of cosmetic products and preparation of seminar.		
Required Reading: 1. Denyer S, Hodges N., Gorman S.: Pharmaceutical Microbiology, Blackwell Publishing, 2004. 2. Duncan M., Horan N.J.: Water and wastewater microbiology, AP, 2003. 3. Lightfoot N.F., Maier E.A.: Microbiological Analyses of Food and Water, Guidelines for Quality Assurance, 2012, Elsevier, The Netherlands.		
Weekly Contact Hours: 6	Lectures: 3	Practical work: 3
Teaching Methods: Lectures and students group work		

Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	Final exam	points
Active class participation	5	written exam	-
Practical work	-	oral exam	30
Preliminary exam(s)	50	
Seminar(s)	15		
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.			