

Study Programme: Chemistry			
Course Unit Title: Chemistry of Organic Dyes			
Course Unit Code: IHO-402			
Name of Lecturer(s): Assistant professor Andrea Nikolić			
Type and Level of Studies: Bachelor Academic Studies			
Course Status (compulsory/elective): Elective			
Semester (winter/summer): Winter			
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 Acquiring knowledge about the properties, origins, significance, and division structures of organic dyes. Introduction to synthesis and application of synthetic and natural organic dyes. Acquiring knowledge about organic pigments division and structure of organic pigments.			
Learning outcomes Demonstration of acquired knowledge about the chemical properties, structure and application of organic dyes and pigments. The application of the acquired theoretical knowledge and experimental techniques in the synthesis and isolation of organic dyes. Formulating conclusions about the possible applications of natural and synthetic organic dyes and pigments, as well as their impact on the environment.			
Syllabus <i>Theoretical instruction</i> The concept of the origin of coloration. Classification of dyes. The most important types of colours. Structure, synthesis and application of colour: polymethine dyes, nitro and nitroso dyes, azo dyes, di and triphenylmethine dyes and their aza analogues, indigoid dyes, anthraquinone dyes, reactive dyes, sulphur dyes. Organic pigments. Classification and structure of organic pigments. Phthalocyanine pigments. Azo pigments. Synthesis of pigments. Effect of organic dyes and pigments on the environment. <i>Practical instruction</i> Synthesis of selected organic dyes. Isolation natural dyes.			
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
Activity	5	Written exam	70
Lab exercises	10	Oral exam	
Seminar work	15		