Course Unit Descriptor

Study Programme: Graphic Engineering and Design			
Course Unit Title: Graphic Materials			
Course Unit Code: F106			
Name of Lecturer(s): Miljana Prica			
Type and Level of Studies: Bachelor Level			
Course Status (compulsory/elective): compulsory			
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: 8			
Prerequisites: None			
Course Aims: Training students to think abstractly and acquire basic and practical knowledge in the field..			
Learning Outcomes: Acquired knowledge is used in the profession, in the individual work, and in further education			
Syllabus: Materials in graphic environment – classification, basic terms, crystal and micro structure, physical and chemical properties. Paper. Production of paper, cardboard, paperboard: obtaining raw materials, preparing paper mass, producing paper, classifying paper and cardboard, researching methods. Supplementary materials for the production of paper, cardboard and paperboard – fillings, sizing agents, and colorants. Paper improvements – impregnation, coating and varnishing. Dyeing paper, cardboard and paperboard. The most important properties of paper, cardboard, paperboard and research. Surface properties – smoothness, dust, hardness (plucking resistance). Optical properties of paper – whiteness, transparency, opacity, shininess and colour. Chemical properties – pH and determining the filling content. Printing inks: types, content, role of components and printing properties. Relation colour – substrate and classification of printing inks according to purpose. Production and investigation methods of general properties significant for the application in the printing industry. Glues in printing industry and methods of investigating their properties. Polymeric materials in graphic engineering: application, modelling and researching the basic properties. Packaging materials. Textile: characteristics, physical and chemical properties, dyeing. Bookbinder`s board. Leather as a graphic material – leather covering. Ceramics as a graphic material: application, modelling, dyeing and investigating the basic properties. Rubber as a graphic material: application, modelling and investigating the basic properties.			
Required Reading: Relevant literature in English TBD			
Weekly Contact Hours: 8	**Lectures:** 4	**Practical work:** 0	
Teaching Methods: Teaching is held interactively as lectures and laboratory practice. During lectures, the theoretical part of the teaching content is presented and supplemented by characteristic examples for better understanding. During laboratory practice, the obtained knowledge is practically applied on the available laboratory equipment. Apart from lectures and practice, consultations are held regularly.			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	**Final exam**	points
Laboratory exercise attendance	5	oral exam	30

Lecture attendance	5	written exam	40
Laboratory exercise defence	20		
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.			