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| **Study program:** Doctoral academic studies **-** Chemistry |
| **Course title:** Color Chemistry (H338C) |
| **Name of lecturer/lecturers:** Milena N. Miljković |
| **Type of course:** elective |
| **Number of ECTS allocated:** 10 |
| **Course objectives**To prepare PhD students for independent scientific work in the field in chemistry of colors. The course introduces students to classifications, structures, nomenclatures, syntheses, properties and applications of colors. |
| **Course outcomes** Students are taught to distinguish all types of colors according to different classifications and structures. They acquire the knowledge to recognize different classes of colors depending on the applied nomenclature as well as based on the substrate for which the given colors are used. They acquire the knowledge that is necessary for the advanced development of all areas of dyeing technology.  |
| **SYLLABUS***Lectures*Color classification, history of colors and pigments, production of colors. Color of organic components. Polyene and polymethine dyes. Di- and triarylmethine dyes and their azo analogues. Azo [18] annulenes. Nitro and nitroso dyes. Azo dyes and pigments. Carbonyl dyes and pigments. Sulfur colors. Fluorescent bleaches. Application of colors and organic pigments. Photo-, thermo-, and electrochemical reactions of dyes. Dyes in imaging and data recording systems. Dyes in biochemistry, biology, medicine and analytical chemistry. Analysis, ecology and toxicology of dyes. |
| **References**1. H. Zollinger, Color Chemistry, Wiley VCH Verlag GmbH, 2008.2. M. Novaković, Teorija i tehnologija oplemenjivanja tekstila bojenjem i štampanjem, BMG, Beograd, 1996.3. D. Džokić, Teorija i tehnologija bojenja tekstilnog materijala, Tehnološko-metalurški fakultet, Beograd, 1989.4. B. M. Ignjatovć, S. S. Jovanović, Praktikum iz tehnologije bojenja tekstila, Tehnološki fakultet, Leskovac, 1995. |
| **Active teaching classes** | **Lectures:** 105 | **Laboratory work:** / |
| **Teaching mode:** lectures, seminars, consultations |
| **ASSESSMENT METHODS AND CRITERIA (Max 100 points)** |
| activity during the lecture - 10 points; seminars - 45 points; written exam - 50 points |