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| **Study program** Undergraduate Studies |
| **Course title** Fundamentals of industrial chemistry (H124C) |
| **Name of lecturer/lecturers**  Aleksandar Bojić, Jelena Mitrović |
| **Type of course** Obligatory |
| **Number of ECTS allocated 7** |
| **Course objectives** Providing basic theoretical and practical knowledge of chemical-technological processes, necessary for understanding of specific technologies of the chemical industry. Introduce to preparation procedures of raw material and production technologies of important chemical and food products. |
| **Course outcomes**. Upon successful completion of this course, the student is able to define the elements of chemical-technological process, predict the speed character of the chemical-technological process, make a basic scheme and predict phasing of the chemical-technological process, proposes a procedure for the preparation of different raw materials, describes and present technologies for obtaining important industrial products and to analyze the composition and properties of selected chemical industry products. |
| **SYLLABUS***Lectures* Basics of chemical-technological processes. Basics of speed of chemical-technological processes. Technological schemes and calculations. Basics of chemical reactors. Basics of homogeneous chemical-technological processes. The basics of heterogeneous chemical-technological processes. Basics of catalytic chemical-technological processes. Enrichment, separation and purification of raw materials. Pulp and paper technology. Sugar technology. Malt technology. Beer technology. Fundamentals of fuel technology. Cellulose technology. Oil technology*Laboratory work* Chrome in leather. Gravitational beneficiation of solid raw materials. Beneficiation of ore by flotation. Examination of textile fibers. Fatty substances in cereals. Analysis of coal. Delignification of wood and others ligno-cellulosic materials. Quality of fat and oil. Industrial plant tour. |
| **References**1. M. Purenović, A. Bojić, Osnovni principi i procesi u industrijskoj hemiji, Prirodnomatematički fakultet, Niš, 2005.2. D. Vitorović, Hemijska tehnologija, Prirodno-matematički fakultet-Minerva, Subotica Beograd, 1973.3. M. Purenović, M. Miljković, Odabrana poglavlja neorganske i organske hemijske tehnologije, Prirodno-matematički fakultet, Niš, 2005.4. A. Bojić, A. Zarubica, Praktikum za vežbe iz industrijske hemije, Prirodno-matematički fakultet, Niš, 2007. |
| **Active teaching classes** | **Lectures 60** | **Laboratory work 30** |
| **Teaching mode** Lectures, interactive teaching, laboratory exercises, field-based learning, consultations. |
| **ASSESSMENT METHODS AND CRITERIA (Max 100 points)** |
| **Pre exam duties** | **Points** | **Final exam**  | **Points** |
| Activity during lectures | 5 | Written examination | 40 |
| Practical teaching | 25 |  |  |
| Colloquiums | 30 |  |  |