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| **Study program** Applied chemistry with the management basics |
| **Course title** Quality standards in laboratory(H260C) |
| **Name of lecturer/lecturers** Nenad S. Krstić, Dragan M. Đorđević |
| **Type of course** obligatory |
| **Number of ECTS allocated** 3 |
| **Course objectives**Education of students in the field of ISO standards that are valid in the accreditation process, which should enable the acquisition of theoretical and practical knowledge for students’ independent work in the field of quality system introduction in institutions of different profiles, as well as by mastering quality control norms in post-ISO activities. |
| **Course outcomes**Upon successful completion of this course, the student is able to:* be actively involved in processes related to the standardization of systems and work methodologies, as well as in processes of accreditation in institutions of different profiles;
* work independently based on mastered basic quality management systems (QMS) as well as integrated management systems;
* be qualified for further advancement in this area.
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| **SYLLABUS***Lectures*Within this subject, the following will be studied: Introduction of international standards and their role in the systemquality; International and national organizations for standards, Institute for Standardization of Serbia; Principles of quality management; Development and introduction of quality management system (QMS); Quality improvement. Series of international standards ISO 9000:2008; Management of the system of elements of life environment ISO 14000; Integrated management systems (ISO 9001, ISO 14001, ISO 18001); Development and introduction of QMS in companies of the chemical industry; Quality assurance program for chemical laboratories services; Accreditation of laboratories according to ISO 17025:2006. Standard ISO 7870:2005. Control charts.*Laboratory work*Analysis of case studies in the field of QMS - examples from practice. Independent work in designing QMS. Plotting control charts. |
| **References**1. Z. Matović, M. Đukić, Sistem kvaliteta: vodič za studente hemije, Prirodno-matematički fakultet, Kragujevac, 2018.
2. Pavlović Milan, Kvalitet i integrisani menadžment sistemi, Tehnički Fakultet Mihajlo Pupin, Zrenjanin, Univerzitet u Novom Sadu, 2006.

**Supporting references:**1. ISO 9001:2008, Institut za standardizaciju Srbije.
2. ISO 14001, Institut za standardizaciju Srbije. 3. ISO 17025, Institut za standardizaciju Srbije
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| **Active teaching classes** | **Lectures** 30 | **Laboratory work** 15 |
| **Teaching mode** |
| **ASSESSMENT METHODS AND CRITERIA (Max 100 points)** |
| **Pre exam duties** | **Points** | **Final exam**  | **Points** |
| Activity during lectures | 5 | Written examination | 20 |
| Practical teaching | 15 | Oral examination | 20 |
| Teaching colloquia | 20 |  |  |
| Seminar | 20 |  |  |