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| **Study program** Applied chemistry with the management basics |
| **Course title** Chemicals management (H259C) |
| **Name of lecturer/lecturers** Violeta D. Mitić, Aleksandra N. Pavlović |
| **Type of course** obligatory |
| **Number of ECTS allocated** 3 |
| **Course objectives**The aim of the course is to acquire theoretical knowledge about chemicals and biocidal products that are produced and placed on the market, and used for different purposes (chemicals for general and professional use, biocidal products, plant protection products, cosmetic products and detergents) in order to monitor and prevent their effects on the health of people, animals and the environment, as well as the acquisition of knowledge about classification of chemicals and mixtures, method of packaging and labeling of chemicals and biocidal products. |
| **Course outcomes**Upon successful completion of this course, the student is able to:* prepare documentation for the entry of chemicals into the Chemical Register,
* prepare a safety data sheet for a chemical that is placed on the market,
* implement procedures related to the import and export of certain dangerous chemicals,
* apply provisions related to prohibitions and restrictions on production, marketing and use of
* certain hazardous chemicals,
* carry out the classification of substances and mixtures in relation to different hazard classes
* prepare a technical file for the biocidal product,
* - apply the provisions related to the classification, labeling and advertising of biocidal products.
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| **SYLLABUS***Lectures*General notes on the Law on Chemicals. Integrated management of chemicals in all stages of life cycle. Integral register of chemicals. Regulations governing classification, packaging, labeling and advertising of chemicals. Regulations governing classification, packaging, labeling and advertising of chemicals. Classification of chemicals based on physical and chemical properties, based on properties that affect the life and health of people and that affect the environment. Dossier on chemicals and substances of concern. Particularly hazardous chemicals. Restrictions and prohibitions governing production, marketing and use of particularly hazardous chemicals. Import and export of certain dangerous chemicals. Safety data sheet. Detergents. International conventions governing management of chemicals. Biocidal products and types of biocidal products. Active substances in biocidal products. Technical file of biocidal products. Procedures for placing biocidal products on the market.*Laboratory work* |
| **References**1. C.J. van Leeuwen, T.G. Vermeire, editors, Risk Assessment of Chemicals: an Introduction Springer, Dordrecht, 2007.
2. M. Robson, W. Toscano, Risk Assessment for Environmental Health, J. Wiley & Sons, San Francisco, 2007.
3. W.G. Landis, R.M. Sofield, M. Yu Introduction to Environmental Toxicology: Molecular Substructures to Ecological Landscapes, CRC Press, Boca Raton, 2011.
4. Steven Vaughan Cheltenham, EU Chemicals Regulation: New Governance, Hybridity and REACH, Edward Elgar Publishing, UK, 2015.
5. Marshall Sitting, Handbook of toxic and hazardous chemicals and carcinogens, Noyes Publications, Park Ridge, New Jersey, U.S.A., 1985.
6. Anna Wypych, George Wypych, Databook of Biocides, ChemTec Publishing, Toronto, 2015.
7. Vojkan Jovanović, Transport opasnih materija, Saobraćajni fakultet Beograd, Beograd, 2004.
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| **Active teaching classes** | **Lectures** 30 | **Laboratory work** |
| **Teaching mode**Lectures, consultations |
| **ASSESSMENT METHODS AND CRITERIA (Max 100 points)** |
| **Pre exam duties** | **Points** | **Final exam**  | **Points** |
| Activity during lectures | 5 | Written examination |  |
| Practical teaching |  | Oral examination | 55 |
| Teaching colloquia | 40 |  |  |
| Seminar |  |  |  |