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| **Study program** Master Studies Chemistry | | | | |
| **Course title** Botany | | | | |
| **Name of lecturer/lecturers** Zorica S. Mitić | | | | |
| **Type of course** Elective | | | | |
| **Number of ECTS allocated** 4 | | | | |
| **Course objectives**  Students learn the basic morphological, anatomical and ecological characteristics of plants. Getting to know the basic systematic groups of plants. | | | | |
| **Course outcomes**  Having finished this course successfully, a student will be able to:  - describe the morphological and anatomical characteristics of plant organs and tissues  - identify plant organs and tissues macroscopically and microscopically  - correctly use terms from plant systematics and taxonomy  - recognize taxonomically significant characters and the applied importance of plant identification  - predict plant traits based on their systematic affiliation  - access required plant information using botanical literature and databases. | | | | |
| **SYLLABUS**  *Lectures*  The position and role of plants in the modern system of classification of living organisms. Chemical composition and structure of the plant cell. Plant tissues. Vegetative organs of plants. Generative organs of plants. Propagation of plants. Structure of flower, fruit and seed. Historical development of the plant world on Earth and the first terrestrial plants (Embriophyta). Characteristics and systematics of mosses (subclasses: Anthocerotidae, Bryidae and Marchantiidae), bryophytes (subclass Lycopodiidae), ferns in the narrow sense (subclasses: Equisetidae, Marattidae, Ophioglossidae and Polypodiidae), gymnosperms (subclasses: Ginkgoidae, Cycadidae, Pinidae and Gnetidae) and crypts (subclass Magnoliidae). Basics of plant ecology.  *Laboratory work*  Microscope and microscopy. Microscopic analysis of plant cells and tissues. Microscopic and morphological analysis of vegetative plant organs. Microscopic and morphological analysis of reproductive structures. Characteristics of selected representatives of the subclasses Bryidae, Lycopodiidae, Equisetidae, Polypodiidae, Ginkgoidae, Cycadidae, Pinidae, with special reference to representatives of the families of the subclass Magnoliidae. Taxonomic characters important for distinguishing the most important families and determining plants. Basic habitat characteristics and diversity of adaptations related to phenology, pollination and dispersal. Use of botanical literature and databases. | | | | |
| **References**  1. V. Ranđelović, Botanika, Biological Society "Dr. Sava Petrović", Niš, 2006.  2. P. Jančić, Botanika farmaceutika, JP Službeni list SRJ, Belgrade, 2002.  3. V. Randjelovic, M. Jušković, B. Zlatković, Praktikum iz botanike – anatomija i morfologija biljaka, Biological Society "Dr. Sava Petrović", Niš, 2006. | | | | |
| **Active teaching classes** | **Lectures**  30 | | **Laboratory work**  30 | |
| **Teaching mode**  Interactive lectures, laboratory classes, field classes, consultations. | | | | |
| **ASSESSMENT METHODS AND CRITERIA (Max 100 points)** | | | | |
| **Pre exam duties** | **Points** | **Final exam** | | **Points** |
| Activity during lectures | 5 | Written examination | | 20 |
| Practical teaching | 10 | Oral examination | | 25 |
| Teaching colloquia | 40 |  | |  |
| Seminar | - |  | |  |