Study Programme: PhD in Biology

Degree level: Doctoral degree

Course Title: Taxonomy of higher plants

Professor: Pal Boza, Anackov Goran

Required/Elective Course: Elective Course

Number of ECTS: 15

Prerequisites: Passed exam "Special Systematic of Vascular Plants"

Course Objective: Qualifying students for independent work in the taxonomic laboratories, dealing with problems in the taxonomy of higher plants. Mastering the techniques used in the taxonomy of plants, knowledge of International Code of Botanical Nomenclature.

Course Outcome: Application of acquired knowledge in scientific research, active monitoring of literature and new results in the field of taxonomy of plants, self-creation of the working hypothesis and implementation of the research process in the taxonomy, the development of taxonomic thought and proper interpretation of results.

Course Content:

Theoretical part

Relationships between systematics and taxonomy. Definition of the taxonomy. The definition and concept of species. The history of flora by geohronological categories with special emphasis on those periods and times that are important to the establishment of certain division of higher plants. The history of systematics. Taxonomic categories. Tipification, principles, rules and recommendations. In particular, will point out the taxonomic methods applied in the taxonomy of higher plants: morphological, micromorphological, anatomical, physiological, biochemical metods, used for merging or separation of taxa at different levels of classification. Terms of describing new species, effective publication. International Code of Botanical Nomenclature.

Practical part

The exercises are based on fresh plant material, which collects student. Each student analyzes one type, from different populations, using a variety of (at least three) taxonomic methods. Results of the analysis are listed in the protocol. Morphological, anatomical and physiological methods will be analized in different statistical methods, which indicate the closeness or distance between individuals of the analyzed population. Results of practical teaching will be displayed in the form of a seminar paper.

Reading List:

1. Grant, W.F. (1984): Plant Biosystematics. academic Press, Toronto.
2. Greuter, W., ed. (2000): International Code of Botanical Nomenklatur. International Assotiation for Plant Taxonomy. St. Louis, Missuri, USA.
3. Sivarajan, V.V., Robson, N.K.P. (1984): Introduction to the Principles of Plant Taxonomy. Oxford and IBH Pub. New Delhi.
4. Šugar, I. *transl*. (1987): International code of botanical nomenclature. SNL, Zagreb.
5. Takhtajan, A. (1997): Diversity and Classification of Flowering Plants. Columbia University Press, New York.
6. Walters, D.R., Keil, D.J., Walters, B. Murrell, Z.E. (2002): Vascular Plant Taxonomy. Oxford and IBH Pub. New Delhi.
7. Recommended doctoral dissertations and master's theses in the field of taxonomic methods by the mentor. Scientific papers and web pages with current problems in plant taxonomy

Total hours:			10	
Lectures: 5	Practicals:	Other:	Student research work: 5	

Methods of instruction:

Lectures, individual consultations, laboratory work, seminar papers.

Assessment (maximum number of points 100)

Requirements

The oral exam, defended seminar paper, written exam. The project - established in concept exploration and definition of taxonomic problems, proposed method of settlement.

Remark: