Name of the subject: HIGHER PLANT TAXONOMY

Teacher(s): Dr. Goran Anačkov

Status of the subject: Elective

Number of ECTS points: 15

Condition: none

Goal of the subject

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 Nomenclature for Algae, Fungi and Plants.

Outcome of the subject

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.

Content of the subject

Theoretical lectures: Relationships between systematic and taxonomy. Principles of taxonomy (classification, nomenclature, identification, biosystematics, experimental taxonomy, comparative biology, classification process and hierarchical systems). Taxonomical character. Concepts and categories (1. species, subspecies, variety, form; 2. genus; 3. family and higher categories). Taxonomical data – data types and taxonomical methods (morphological, anatomical, embryological, palynological, phytochemical, cytological and cytogenetical, molecular, genetical and population genetical, reproductive biology data, ecological). Taxonomical data - processing and interpretation, taxonomical data and different approaches in classification. International Code of Nomenclature for Algae, Fungi and Plants. Typification, Principles, Rules and Recommendations. Rules for description of the new taxon (Valid publication of names).

Practical lectures: Analysis of taxonomical data, identification, selection, significance of data and their correlation. Data analysis methods and software support. Data analysis using International Code for Nomenclature, tasks and problems. The results of the practical classes will be presented in the form of a seminar paper.

Recommended literature

1. Stuessy T.F. (2009): Plant Taxonomy, The Systematic Evaluation of Comparative Data, sec. edit.. Columbia Univerity Press, New York.
2. Turland N.J. et all, eds. (2018): International Code of Nomenclature for algae, fungi and plants (Shenzen Code). Koeltz Botanical Books, Glashütten.
3. Stuessy T.F., Crawford D.J., Soltis D.E., Soltis P.S. (2014): Plant Systematics, The Origin, Interpretation, and ordering of Plant Biodiversity, Koletz Scientific Books, Königstein.
4. Simpson M.G. (2019): Plant Systematics, thrd ed. Elsevier Academic Press, Burlington, San Diego, London.
5. Šugar, I. *transl*. (1987): Međunarodni kodeks botaničke nomenklature. SNL, Zagreb.
6. Walters, D.R., Keil, D.J., Walters, B. Murrell, Z.E. (2002): Vascular Plant Taxonomy. Oxford and IBH Pub. New Delhi.

Doctoral dissertations and masters theses in the field of molecular systematics of plants recommended by mentors, as well as scientific papers and websites with current issues in taxonomy and plant systematics.

Number of active classes	Theory:5	Practice: 5

Methods of delivering lectures

Lectures, individual consultations, lab work, seminar papers.

Evaluation of knowledge (maximum number of points 100)

Seminar paper 50 points
Oral exam 50 points