Study program: Integrated Academic Studies in Pharmacy

Course title: Plant Systematics

Teacher: Ružica Igić, Dragana Vukov, Goran Anačkov, Miloš Ilić

Course status: compulsory

ECTS Credits: 5

Condition: -

Course aim

Introducing taxonomic categories most important groups of higher plants, lichens, algae and fungi. Definition of kinship among them. Developing the ability to recognize and correct determination of major groups of plants and fungi. Referring to the systematic group containing representatives of which are used in the pharmaceutical industry and technology. Preparing students for independent work in the collection and herbalization of material as a basis for further study and use of medicinal herrbs and organic systems.

Expected outcome of the course:

Acquiring fundamental knowledge in Plant Systematics. Acquiring the basic techniques of collecting the plant material in field and forming the herbarium collection.

Course description

Theoretical education

The significance of plant systematics. The concept of species, taxonomic categories and nomenclature. Methods of cultivation and collection of medicinal plants. Classification, main features and representatives of: Bryophyta, Lycopodiophyta, Equisetophyta, Polypodiophyta, Pinophyta. Classification, main features and representatives of Divisio Magnoliophyta, Classis Magnoliopsida, Subclassis Magnoliidae. Taxonomic categories within Subcl. Magnoliidae, Subcl. Ranunculidae, Subcl. Hamamelididae, Subcl Ranunculidae, Subcl. Hamamelididae, Subcl. Caryophyllidae. Subcl. Dilleniidae, Subcl. Rosidae, Subcl. Lamiidae, Subcl. Asteridae. Taxonomic categories within Classis Liliopsida, Subcl. Alismatidae, Subcl. Liliidae, Subcl. Commelinidae, Subcl. Arecidae.

Practical education: exercises, other forms of education, research related activities

- Learning the characteristics of main taxonomical groups using preserved and/or live plant material of their representatives: *Marchantia polymorpha, Polytrichum commune, Sphagnum sp., Equisetum telmateia, Lycopodium clavatum, Selaginella helvetica, Dryopteris filix-mas, Polypodium vulgare, Cycas revoluta, Ephedra campylopoda, Ginkgo biloba, Pinus nigra, Juniperus communis, Taxus baccata, Galanthus nivalis, Scilla bifolia, Helleborus odorus, Corylus avelana, Pulmonaria officinalis, Cornus mas, Prunus spinosa, Primula acaulis, Salix caprea, Vinca minor, Hepatica nobilis, Corydalis cava, Tussilago farfara, Forsythia europaea, Chrisosplenium alternifolium, Magnolia grandiflora, Narcissus poeticus, Viola odorata, Malus domestica, Machonia aquifolium, Ficaria verna, Betula pendula, Populus alba, Muscari racemosum, Stellaria holostea, Veronica byzantina, Capsella bursa-pastoris, Lamium maculatum, Drosera rotundifolia, Dactylorhiza majalis, Vicia grandiflora, Chelidonium majus, Liriodendron tulipifera, Spiraea media, Euphorbia cyparissias, Erodium cicutarium, Taraxacum officinalis, Anthriscus trichosperma, Galium cruciata, Dactylis glomerata, Malva silvestris, Silene alba, Silene vulgaris, Salvia nemorosa, Arum maculatum*.
- Field work – independent student work: sampling and presing plants, observing their main features and learning their Latin names and families they belong to.

Literature

Compulsory

1. Judd WS, Campbell CS, Kellogg EA, Stevens PF, Donoghue MJ. Plant systematics, a phylogenetic approach, third edition. Sinauer Associates, Inc. Sunderland, Massachusetts USA, 2008.
2. Takhtajan A. Flowering Plants, second Edition. Springer, 2009.

Number of active classes	**Theory:** 30	**Practice:** 45

Teaching methods: lectures, practices and field work.

Student activity assessment (maximally 100 points)

Pre-exam activities	**points**	**Final exam**	**points**
Field Work	40	Written	20
	-	Oral	40