

Course name: Herbal medicine with elements of phytotherapy (USOS Code: B-BMED.2012Eng)

ECTS: 6

No. of hours: 70 (30 lectures + 40 classes)

Course coordinator: Dr Anna Rysiak, Dr hab. Agnieszka Hanaka, prof. UMCS

Prerequisites: General knowledge of botany and biochemistry

Course description: The scope of research and history of herbal medicine. Plant taxonomy and morphology: vegetative and generative organs of plants as a source of herbal drugs. Review of natural plant communities for abundance of medicinal plants: water and waterside, meadows, and grasslands, forests. Plant drug forms: herbal raw materials and their classification. Dynamics of metabolite content in herbal material. Obtaining herbal material from natural habitats: legal bases, harvesting methods, conservation. Herb cultivation on an industrial scale. Basic definitions (herbal raw material, active compounds), rules of harvesting and drying plant materials, modern methods and techniques for examining medicinal plants. Groups of compounds belonging to primary (carbohydrates, fats: oils, proteins) and secondary metabolites (phenolic compounds, phenylpropanoids, coumarins, tannins, flavonoids, anthocyanins, quinones, terpenes, alkaloids, essential oils). Galenic preparations. Determining the biological and pharmacological activity of plant raw materials. Toxicity, possible side effects, addiction potential. Basics of pharmacological recipe calculation. Utilization of plant raw materials for various industrial purposes.

Recommended literature: Handbook of Herbs and Spices, vol. 1 and 2. Edited by K. V. Peter. Woodhead Publishing Limited, Cambridge, England, 2001, 2004; Plant Specialized Metabolism: Genomics, Biochemistry, and Biological Functions, Edited by G. Arimura, M. Maffei. CRC Press, USA, 2016; Ben-Erik van Wyk, Michael Wink. Medicinal Plants of the World. CAB International, 2018; Duke J. A. Handbook of medicinal herbs. CRS Press, 2002.