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| Course: | *Medicinal, aromatic and spice plants* |
| Course id: 3ORT6O23 |
| Number of ECTS: 4 |
| Teacher: | Ph.D. Jovan Crnobarac; contributors: Ph.D. Dragana Latković, Ph.D. Goran Jaćimović |
| Course status | Elective |
| Number of active teaching classes (weekly) |
| Lectures: 2 | Practical classes: 2 | Other teaching types: | Study research work: | Other classes: |
| Precondition courses | Agrochemistry, Fundamentals of crop production, Diseases and pests of field plants, Agricultural machinery |
| 1. Educational goal

The aim is to introduce students with the most important species of our wild and cultivated medicinal plants that are increasingly required in the domestic and foreign markets, as the necessary raw materials for the pharmaceutical and food industries. The richness of our medical flora, both in number of species, but also according to their chemical diversity is very high. However, the collection of medicinal plants from spontaneous flora, so far has been performed insufficiently skilled, disorganized, irrational, uncontrollable, which contributed to vulnerability of certain very important plant species. By controlled field production would be obtained pure, high-quality, typified raw material for the market. By gaining a basic knowledge of technological processing of medicinal plants, would have been complied international standards which this material is subject to. |
| 1. Educational outcomes

After completion of lectures and exercises student will be qualified and informed with the basic elements of growing technology of medicinal, aromatic and spice plants. After passing the exam, the candidate will be qualified to lead the production of cultivated this plants and to be successful in this production; and will be trained to combine the knowledge, ability and skills with the given environmental and edaphic conditions. At the same time students will be trained to planed and quality collects and prepares medicinal, spice and aromatic plants. |
| 1. Course content

***Theoretical teaching***: In the general part will be studied: the definition of the course, division, professional nomenclature and herbal medicinal ingredients. In the next section will be studied: agrotechnical basics of growing of medicinal, aromatic and spice plants, propagation, care, protection, harvesting, drying, primary processing, packaging, storage, transport and benefits of growing. In the primary processing will be studied: stabilization, fermentation, standards and impurities, substitutions, forgeries, and the causes of deterioration of raw materials. Drug use in pharmaceutical, cosmetic, parfumery, food and other industries. Simple forms of drugs from plants. In a separate section will be studied the following plant species per family: I Fam. Apiaceae: fennel, caraway, coriander, anise, dill. II Fam. Lamiaceae: mint, lavender, lemon balm, sage, clary sage, thyme, marjoram, basil. III Fam. Asteraceae: pyrethrum, wormwood, tarragon, chamomile, calendula. IV Fam. Malvaceae: marshmallow. V Fam. Valerianaceae: valerian. VI Fam. Scrophulariaceae: woolly digitalis, purple digitalis. VII Fam. Gentianaceae: gentian.***Practical exercises***: Introducing by the herbarium samples of medicinal plants, whole and cut drugs, analysis of mixtures. Estimation of the quality of drugs according to Pharmacopeia. Program of field exercises: Botanical determination, sampling and analysis, exploring the basis of production, propagation, cultivation, care, protection, harvesting, drying, packaging, protection against insects etc. |
| 1. Teaching methods

Lectures, Practice/ Practical classes, Consultations |
| Knowledge evaluation (maximum 100 points) |
| Pre-examination obligations | Mandatory | Points | Final exam | Mandatory | Points |
| Activity during lectures | Yes | 5 | Test I (general part) | Yes | 35 |
| Colloquium - Test | Yes | 25 | Test II (special part) | Yes | 35 |
| Literature  |
| Ord. | Author | Title | Publisher | Year |
|  | John H. Martin, Richard P. Waldren, David L. Stamp | Principles of Field Crop Production | Pearson Education Inc., Upper Saddle River, New Jersey, Columbus, Ohio, USA | 2006 |
|  | Bharat P. Singh | Industrial Crops and Uses | Fort Valley State University, Fort Valley, Georgia, USA, CAB International | 2010 |
|  | Internet sources; Thematic domestic and international journals |
|  | Lecture notes of professors and assistants |

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| Znak univerziteta | UNIVERSITY OF NOVI SADFACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme AccreditationUNDERGRADUATE ACADEMIC STUDIES CROP SCIENCE |
| Table 5.2 Course specification |