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| Name of course: **Cultivation of medicinal plants** | **Credit value: 3** |
| **Course** **classification**: optional | |
| **The proportion of the practical nature of the course, „educational character”: 50-50%** | |
| **Type of course: B 14** theoretical / **14** practical, and the **total number: 28 hours** in the given **semester.**  Further (unique) means and properties of knowledge transfer: - | |
| **Exam** type (colloquium / practical grade / **other** ):  **practical course mark**  Further (unique) means of knowledge verification**: -** | |
| The curricular **place of the course** (which semester): 3 | |
| Prerequisites (if any): - | |

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| **Course description: a brief, but informative description of the knowledge to be acquired (14 weeks).** |
| The aim of the course is to give thematic and complex knowledge about the domestic and international importance of medicinal plant production, the particular ecological and economic conditions of cultivating medicinal plants, the cultivation technology of herbs, breeding medicinal plants, the basic processing ways and the storage of herbs and drugs and their utilization. With the acquired knowledge students will be able to grow the medicinal plant species cultivated in Hungary and process the herbs with the knowledge of quality requirements of drugs.  Thematic of subject:  1 week: The importance and tendencies of growing medicinal plants in Hungary and in the world. Agro-ecological conditions of medicinal plant production. Drugs and their systematization.  2 week: Genetical background of cultivating of medicinal plants. Gathering of medicinal plants.  3 week: General and specific methods of production technology of medicine and aromatic plants (crop rotation, nutrient supply, tillage, sowing, plant protection, harvest).  4 week: Possibilities and practice of aromatic plant production in organic farming.  5 week: Processing and storing of medicinal and aromatic crops (drying, extraction of active substances).  6 week: Qualifying of herbs and drugs.  7 week: Production of annual herbs (Coriandrum sativum, Anethum graveolens, Pimpinella anisum, Carum carvi).  8 week: Majorana hortensis, Ocimum basilicum, Satureja hortensis production  9 week: Matricyria chamomilla, Calendula officinalis, Silybum marianum Sinapis albus production  10 week: Papaver somniferum production  11 week: Production of biennial herbs (Digitalis lanata, Digitalis purpurea, Salvia sclarea).  12 week: Production of perennial herbs (Mentha piperita, Melissa officinalis, Lavandula angustifolia.  13 week: Thymus vulgaris, Levisticum officinale Production  14. week: Valeriana officinalis, Salvia officinalis Production |
| **Required and recommended reading:** |
| **Required reading:**   1. Hornok, L. (1992) Cultivation and Processing of Medicinal Plants. John Wiley & Sons Ltd, Baffins Lane, Chicester, UK 338. p. ISBN 0-471-92383-4 2. WHO guidelines on good agricultural and collection practices (GACP) for medicinal plants. World Health Organization Geneva (2003)   **Recommended reading:** |
| **Competencies to be acquired, related to the course:** |
| **a) Knowledge:**  -Knows in detail the natural science basis of the medicinal plant production. Acquainted with the correlation between the medicinal plant production and the environment and nature, knows well the basis of the processing of herb products with high biological value.  - Acquired knowledge to up-to date technologies used in production and processing of medicinal plants and their practical application  - Knows and understands the principles of saving the natural environmental and knows the environmental-, nature conservation-, hygiene- and food-chain security-, food safety and occupational safety regulations connected to the herb production.  **b) Ability:**  - Capable of versatile and interdisciplinary approach of professional problems of medicinal plant production.  - Capable of practical using complicated, new methods, techniques and technologies in medicinal plant production.  - Ability in recognizing and solving the routine like problems occurring in the medicinal plant production processes.  - Ability in determination, planning and organization of works connected to medicinal plant growing.  **c) Attitude:**  - Open minded and susceptible in acquire the innovative and up-to date professional methods and their application in the practice of the medicinal plant growing.  - Students look for ways to change work methods to improve performance  - Health of the individual and society beside of environmental protection plays an important part in the professional decisions  - Recognize and accept the risks and limits of the decisions connected to the medicinal plant production.  - Definite and persistent but accept the professionally substantiated critical remarks.  **d) Autonomy and responsibility:**  - Students are able to bear the responsibility of the decisions and responsible for own and the attached workforce’s work  - Students are decisive at the right time  - Based on the professional knowledge students can set up the implementation plan of R&D projects independently, and bear the responsibility of direct managing of the development activity  - Capable for independent and environmentally friendly medicinal plant production |

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| **Course leader** (name, post, academic degree): **Dr. Ábrahám Éva Babett assistant professor, PhD** |
| **Other lecturer(s) involved in teaching the course, if any** (name, post, academic degree): **-** |