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| **Title** of the subject: **Herbology** | **Credit: 5** |
| **Type** of the subject: **compulsory** | |
| **Ratio of theory and practice: 60 /40** (credit%) | |
| **Type and number of classes per semester**: **70 hours per semester** (3 h lecture / 2 h practice per week**)** | |
| **Type of exam**: exam / practical course mark | |
| **Subject in the curriculum:** semester 1 | |
| Preliminary requirements:- | |

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| **Summary of content - theory**: The knowledge to be acquired is concise, as well as a 14 week breakdown of lectures. |
| Description of goal:  Definition of weeds, harms of weeds. Life types of weeds. Reproduction and  dormancy of weeds. Identification of weed species. Identification of weed seedlings and seeds.  Competition among weeds and crops. Allelopathy. Climate change and weeds.  Students can recognise significant weed species and know biological founds of weed control,  able to pretend spread of weeds.  Course objectives:   1. Life types of weeds 2. Damage of weeds 3. Allelopathy and its significance in plant protection 4. Propagation of weeds, dormancy, knowledge of generative and vegetative propagation formulas 5. Weed surveying methods 6. Physical, mechanical, agrotechnical, biology, chemical weed control methods 7. Methods of applying herbicides, spraying aids 8. Uptake and translocation of herbicides 9. Herbicide resistance, development, inheritance, possibilities of prevention development, knowledge of resistant weed biotypes 10. Herbicide groups 11. Herbicide groups 12. Seedling identifications 13. Seedling identifications 14. Seed identifications |
| **Summary of content - practice**: The knowledge to be acquired is concise, as well as a 14 week breakdown of practice. |
| Description of goal:  Training of plant protection, who are in possession of an appropriate economic approach, they know the cultivation of plants, knows effective ways to control weeds. They know the temporal appearance of weeds and effective and in many cases preventive protection against them.  Skills to be learnt:   1. Identification of Therophyta weed species 2. Identification of Hemitherophyta weed species 3. Identification of Hemikryptophyta weed species 4. Identification of Geophyta weed species 5. Identification of Hidrophyte and other weed species 6. Integrated weed management (IWM) 7. Field practice (Herbicides application methods) 8. Allelopathic examination with some major weeds 9. Allelopathic examination with some major weeds 10. Allelopathic examination with some invasive weeds 11. Allelopathic examination with some invasive weeds 12. Seed identification 13. Seedling identification 14. Seedling identification |
| **Literature, handbooks in English** |
| 1. Alden S. Crafts (1975): Modern Weed Control. University of California Press. ISBN 0-520-02733-7 2. Cobb, A., Reade, J. (2010): Herbicides and Plant Physiology. Wiley Ltd. USA ISBN-13: 978-1-4051-2935-0 3. Haflinger, E., Scholz, H (1981): Grass weeds. Ciba-Geigy Ltd. Switzerland 4. Steven R. R., Jodie S. H. (1984): Weed Ecology Implications for Vegetation Management. A Wiley-Interscience Publication. USA ISBN 0-471-87674-7 |
| **Competencies gained** *(acc. to the Regulation on training and outcome requirements)* |
| 1. **Knowledge:**  * Knows, integrates, synthesizes and broader cultivation and management, development also places the disciplinary knowledge of plant protection in systems * Knows the mechanism of action of the herbicides that can be used, work and food hygiene and as well as occupational safety regulations. * Knows plant protection strategies.  1. **Skills:**  * They will be able of integrated weed management against that pose a threat to plants planning and implementation. * They will be able to perform practical plant protection, administrative and other phytosanitary management tasks.  1. **Attitude:**  * Has the necessary knowledge to perform engineering and managerial duties. * Susceptible and suitable for cooperation. * Their work is characterized by high standard. * They are able to stand up for their views, but are open to others’ opinions as well.  1. **Autonomy and responsibility:**  * They can recognize the risks and boundaries of their decisions. * They have an independent sense of professional responsibility. * They are fully aware that in a foreign environment they always represent their country, thus influencing the picture of it by their behaviour. |

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| **Responsible lecturer: Arnold Szilágyi, assistant lecturer** |
| **Other lecturer(s): -** |

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| **Terms of course completion:** |
| Successful completion of weed detection  Completing exercises |
| **Form of examination:** |
| Written examination |
| **Requirement(s) to get signature:** |
| Attendance at the lecture is recommended, attendance at the exercises is mandatory (4 allowed absences per semester). |

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| **Exam questions:** |
| 1. Describe the attributes of Therphyta group 2. Describe the attributes of Hemikryptophyta group 3. Describe the attributes of Geophyta group 4. What is allelopathy and what is its significance in plant protection 5. Describe the physical, mechanical, agrotechnical, biological, chemical weed control methods? 6. Describe the pressowing (PPI) weed control? 7. Describe the preemergens (PRE) weed control? 8. Describe the postemergens (Post) weed control? 9. Describ herbicide resistance? How would guard against resistance? 10. Describe the herbicide groups (modes of action, symptoms, sensitive weeds)? |