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| Name of course: **Biological bases, variety use** | **Credit value: 3** |
| **Course** **classification**: optional | |
| **The proportion of the practical nature of the course, „educational character”: 50-50%** | |
| **Type of course:** theoretical / practical, and the **total number: 1+1 hours** in the given **semester.**  Further (unique) means and properties of knowledge transfer: | |
| **Exam** type (colloquium / practical grade / **other** ):  **colloquium**  Further (unique) means of knowledge verification**:** | |
| The curricular **place of the course** (which semester): 2 | |
| Prerequisites (if any): **-** | |

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| **Course description: a brief, but informative description of the knowledge to be acquired (14 weeks).** |
| In the course Biological bases and variety use we acquaint students with the importance, conditions, legal regulation of the use of propagation material, the significance of biological bases, their peculiarities in the most important field plant species, the aspects of modern variety use and variety selection.  Subject topics:  1. The past of breeding activities in Hungary  2. Legal background and regulations in classification of biological funds  3. International Organizations for Variety Use and Seed Certification. Situation of domestic and international seed production  4. Domestic system of seed production and distribution  5. Variety protection. Economic evaluation of varieties  6. Legal regulation of the acceptance of genetically modified varieties  7. The role of biological bases in quality wheat production  8. The role of biological bases in the cultivation of other cereals  9. The role of biological bases in maize cultivation  10. The role of biological bases in sunflower cultivation  11. The role of biological bases in rapeseed cultivation  12. The role of biological bases in the cultivation of legumes  13. The role of biological bases in the cultivation of fodder plants  14. The role of biological bases in the cultivation of cereals |
| **Required and recommended reading:** |
| **Required reading:**  [Robert W. Allard](https://www.wiley.com/en-us/search?pq=%7Crelevance%7Cauthor%3ARobert+W.+Allard) (1999). Principles of Plant Breeding, 2nd Edition. ISBN: 978-0-471-02309-8, 264 p.  [Jack Brown](https://www.wiley.com/en-us/search?pq=%7Crelevance%7Cauthor%3AJack+Brown), [Peter Caligari](https://www.wiley.com/en-us/search?pq=%7Crelevance%7Cauthor%3APeter+Caligari) (2011). An Introduction to Plant Breeding ISBN: 978-1-444-35770-7, 244 p.  **Recommended reading:**  D. P. Singh A. K. Singh A. Singh (2021). Plant Breeding and Cultivar Development1st Edition  ISBN: 9780128175637, p.662  George Acquaah (2020). Principles of Plant Genetics and Breeding, 3rd Edition. ISBN: 978-1-119-62632-9, p.848 |
| **Competencies to be acquired, related to the course:** |
| **a) Knowledge:**  - Students know in detail the current requirements of the knowledge and activity system of crop production, the main theories, the overall relations, the limitations of their application, and the terminology describing them.  **b) Ability:**  Students are able to apply complex, new methods and techniques and technologies that can be used in crop production.  They are able to identify special professional problems related to crop production, to explore and formulate the detailed theoretical and practical background needed to solve them.  **c) Attitude:**  Students are open to learn about and practicing modern and innovative crop production methods.  **d) Autonomy and responsibility:**  -Students have autonomy as to the way in which crop production activities are carried out.  They are able to manage independently, with an environmental approach, to apply and develop modern agricultural technologies related to crop production. |

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