**AGROGENETICS BMM1201**

**TOPICS and REQUIREMENTS**

***Lecture (45min) + Practical course (45min)***

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| **Week** | **Topic** | **Remarks** |
| **1** | Topics and requirements in agrogenetics. The subject and brief history of genetics |  |
| **2** | The organization of hereditary material: cytogenetic basics |  |
| **3** | The structure and function of nucleic acids |  |
| **4** | Changes of the hereditary material |  |
| **5** | Mutation, recombination, transformation, large-scale chromosomal changes |  |
| **6** | Extranuclear inheritance |  |
| **7** | Patterns of chromosomal inheritance |  |
| **8** | Mid-term test |  |
| **9** | Basic terms of population genetics |  |
| **10** | Quantitative genetics |  |
| **11** | Agricultural biotechnology. The concept of biotechnology |  |
| **12** | Plant tissue cultures |  |
| **13** | GMOs in agriculture |  |
| **14** | End-term test |  |

**Requirements:**

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| Participation in classes: | Attending the lectures is recommended.  Participation in the practical course is mandatory. |
| Inspections during the semester: | Mid-term test and end-term test |
| Credit assigned to the subject: | 3 |
| Method of determining the grade: | Term-grade, according to the results of the two test papers  Evaluation of the performance:  0-49 %: fail  50-59 %: pass  60-79 % satisfactory  80-89 %: good  90-100 %: excellent |
| Recommended readings: | Dr habil Molnár Mónika: Selected chapters of genetics. Lecture notes for students of agricultural engineering. University of Nyíregyháza, Institute of Environmental Science, 2022  ISBN 978-615-6032-56-0 |
| Recommended homepages: |  |