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| Name of course: **Quality control of field crops** | **Credit value: 3** |
| **Course** **classification**: compulsory |
| **The proportion of the practical nature of the course, „educational character”: 50 %:50 %** |
| **Type of course: 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 grade**Further (unique) means of knowledge verification**: written exam** |
| The curricular **place of the course** (which semester): 2nd semester |
| Prerequisites (if any): **-**  |

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| **Course description: a brief, but informative description of the knowledge to be acquired (14 weeks).** |
| The purpose of this subject is to improve the student’s competence for to understand the importance of different quality parameters in agricultural or food use and to prepare them for the interpretation of process and results of quality control. Its first part is about the general issues of quality control; definitions, its aims and principles. The second part summarizes the possibilities of physical, chemical and microbiological analysis used in the quality control of agricultural products, the principles of main methods used in quality analysis. The third part presents the quality requirements of agricultural products, focusing on standards, recommendations and industrial demands, the role and effects of different parameters and the importance of different analytical properties.. 1. Introduction. Quality assurance methods and tools.
2. About FAO-WHO and Codex Alimentarius.
3. Sampling methods
4. Lot, primary samples, bulk samples, laboratory samples
5. Testing laboratory, accreditation.
6. Organoleptic tests
7. Cereal qualification methods
8. Quality control of grains (physical methods)
9. Quality contol of wheat and flour (rheological methods)
10. Wheat and flour tests (protein content, wet gluten content, Hagberg-falling number)
11. Quality control of industrial crops (potato)
12. Quality control of industrial crops (sugar beet)
13. Quality control of industrial crop (oil plants, sunflower)
14. Quality control of industrial crop (oil plants, rapeseed)
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| **Required and recommended reading:** |
| **Required reading:** Sipos, P. (2013): Quality analysis of Agricultural Products. University of Debrecen. ISBN:978-963-473-660-81. **Recommended reading:** Kent K. Stewart-John R. Whitaker (1984): Modern Methods of Food Analysis. Avi Publishing Company, INC Westport, Connecticut. ISBN: 978-94-011-7381-0
2. Marwaha, K. (2010): Control and Analysis for Food and Agricultural Products. Gene-Tech Books New Delhi India. 664. 272 p. ISBN 978-81-89729-93-6
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| **Competencies to be acquired, related to the course:** |
| **a) Knowledge:** - Has general and profession-specific theoretical and practical knowledge related to a specific field.- The student's theoretical and practical knowledge is organized into a system.**b) Ability:**- The student plans and solves the tasks of the given profession by selecting the necessary methods and tools, applying them individually and in a complex way.**c) Attitude:** - The student is open to new results and innovations in the given field, strives to get to know, understand and apply them.- Strives for continuous self-education.**d) Autonomy and responsibility:**- The student performs his / her work independently, with continuous self-monitoring. |

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