

AGRICULTURAL ENGINEERING GRADUATE DEGREE PROGRAM

- 1. Name of graduate degree program:** MSc in Agricultural Engineering
Qualification level that can be earned in the graduate degree program and designation of the qualification in the degree certificate:
 - Qualification level: master; (magister, MSc in short)
 - Qualification: certified agricultural engineer
 - Designation of the qualification in English: MSc in Agricultural Engineering

- 2. Academic discipline:** agricultural

- 3. Accepted qualifications for entry into the master's degree program:**
 - 4.1– in case of a BSc degree in Agricultural Engineering the whole amount of collected credits points can be taken into account for the master's program.
 - 4.2. By having earned the amount of credit points determined by section 11, the following degrees can be considered for entering the master's program:
BSc in Agricultural Engineering and Environmental Management, Plant Production Engineering, Animal Husbandry Engineering, Horticultural Engineering, Information Technology and Agricultural Public Policy Administration Engineering, Economics and Rural Development Engineering, Environmental Protection Engineering, Food Engineering, Wildlife Management Engineering
 - 4.3. By having collected the number of credit points determined by section 11, the following degrees can also be considered for entering the master's degree program: undergraduate degree programs that result in a Bachelor's or Master's level certificate, and college level (4 year program) and university level (5 year program) degrees in compliance with the Act LXXX. Of 1993 about higher education that are accepted by the Credit Equivalence Committee of the institution after the assessment of students' knowledge based on which the number of credit points were earned.

- 4. Training duration in semesters:** 4 semesters

- 5. Number of credit points to be earned to complete the master's degree program :** 120 credit points
 - 6.1. number of credit points for foundation courses: 15 – 28 credit points;
 - 6.2. number of credit points for core professional training content: 39 – 56 credit points;
 - 6.3. number of specialized credit points for differentiated professional training content: 15 credit points
 - 6.4. minimal number of credit points for optional courses: 6 credit points;
 - 6.5. credit points for degree thesis: 30 credit points.
 - 6.6. ratio of applied skills: at least 30 % according to the institutional curriculum.

- 6. Goal of the master's degree program, professional competence that has to be acquired:**

The purpose of the program is to train certified agricultural engineers who are able to synthesizing apply the agricultural, natural scientific, technical, social scientific and economic knowledge they acquired in the master's program in the field of agricultural sciences. They are able to join scientific work in the field of

their expertise and participate in doctoral (PhD) or specialized postgraduate training programs.

a) *Knowledge that can be acquired in the master's degree program: 71*

- Courses in plant sciences, animal sciences, economic and human sciences, environmental and quality assurance
- courses in natural sciences, mechanics, social and economic sciences that are needed to practice the profession
- Courses related to agricultural production, technologies and the production of primary products
- Ethical aspects of plant production, animal breeding, and food ingredient production
- Fundamental principles of sustainable agriculture, quality assurance and rural development

b) *Graduate students of the master's program are able to:*

- perform the tasks of controlling production processes and quality assurance or engineering services in agriculture and the related areas
- work productively in a selected specialized field within agricultural sciences, recognize, apply and develop the causalities
- recognize problems in their area of expertise, develop substantive and functional solutions, conduct innovative research activities aimed at planning and development
- take part in scientific activities in the field of agricultural sciences
- manage competitions and tenders
- implement and oversee production processes, apply research results
- adhere to and enforce environmental regulations
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c) *Personal qualities and skills necessary to apply their knowledge:*

- Ability to recognize and solve problems
- Creativity
- Sensitivity to the environment
- Observance of environmental regulations
- Communication competence necessary to perform engineering and managerial tasks
- Professional sense of responsibility
- Demand for further professional development
- Capability to cooperate, and fill in leading positions after having gained enough experience.

7. Essential study areas for the master's qualification level :

8.1. Compulsory study areas that are necessary to the master's degree and expand the scope of knowledge acquired in the undergraduate degree programs: (15-28 credit points):

Foundation courses in engineering and natural sciences: production physiology, applied plant physiology, applied biochemistry, applied genetics, applied soil science.

8.2. Compulsory study areas of the core training content: (39-56 credit points): 72

Plant sciences : integrated field crop production, integrated horticultural production, plant biotechnology, fodder management and irrigation

management, production organization, *animal sciences*: population genetics and reproduction biology, organization of breeding, forage management, rating of animal products, economics and social sciences, marketing, economy in the agricultural sector, enterprise and project management, managerial skills, *environmental and quality assurance*: quality assurance, environmental and landscape management.

8.3. Compulsorily optional areas of study in the core professional training content: (15 credit points)

Communication, logistics, research methodology, professional communication competence in a foreign language

8.4. Special areas of study necessary to complete and defend the degree thesis. : (At least 6 credit points)

8.5. Degree thesis: (30 credit points)

8. Requirements of the internship of the degree program:

The duration of the internship is at least 4 weeks determined by the curriculum of the higher education institution.

9. Language requirements:

At least an intermediate level, state-recognized, complex language certificate or the equivalent school leaving exam certificate is required to earn the master's degree in any modern foreign language which has got scientific literature in that particular profession.

10. Entry requirements of the graduate degree program:

Based on the equivalence of credits that represent students' knowledge, - as defined by higher education acts – students must have at least 60-84 credit points from their previous studies in the following areas: natural sciences, technology, plant production, animal husbandry and economics.

The entry requirement is that students must have 60 credit points in addition to the compulsory credit points. If these 60 credit points are recognized, the institution can order students to earn no more than 24 additional credit points within the listed study areas parallel with the masters' training program. (in compliance with the studies and examination regulations of the higher educational institution).