



Mathematics (3MI09NAK05B) BSc in Horticulture

Number of hours per semester: 39 (1 lecture+2 practices/week)

Credits: 3

Language: English

Prerequisites: No

Course type: mandatory

Department: Department of Biometrics and Agricultural Informatics

Course leader: Dr. Ittész András

Course description: During the semester, students receive training in basic informatics, knowledge of which is essential in their agricultural studies. Seminars are organized in a computer laboratory.

Discussed topics

1. Review of highschool material; Functions: graphs and transformations

Domain and range of a function; Elementary functions (linear, power, root, absolute value, exponential and logarithmic); calculation with power, root, exponential, log and trigonometric formulas

Inequalities; Quadratic equations, quadratic formula, the discriminant

2. Basic concepts of set theory

3. Sequences of real numbers, convergence

4. Limits at infinity

5. Inverse functions, composite functions, parity, symmetry, periodicity, boundedness, extreme values, zero places, concavity, inflection points, Finite and infinite limits

6. Continuity of functions

7. Differential Calculus

8. Higher derivatives, monotonicity and extreme values, concavity and point of inflection

Sketching a graph of a function

9. Indefinite integrals, special rules, definite integrals, improper integrals, applications

Assessment, grading:

Requirements of signature:

- Missing not more than 3 occasions
- Achieving at least 50% on the final (theoretical) exam

Requirements of final grade:

- Signature
- Practical exam Mathematics from the topics studied during the semester

Course lecturers: Fejes Tóth Péter lecturer, Mesterházy Ildikó lecturer