Universal algebra

2025 Spring

Code of course: BMA-LOTD-325.08, BMI-LOTD-325E.08
Title of course: Universal Algebra
Lecturer: Zalán Molnár

Content of the course:
The course covers basic definitions and theorem of universal algebra, such as lattices, congruences, homomorphism theorems, product, quotient, subalgebra, subdirect decomposition, terms, free algebras, identities, varieties, discriminator varieties, ultraproducts, Birkhoff's theorems, Mal'vec conditions, logical applications: Boolean algebras, connections with category theory.

Grading criteria, specific requirements:
Grading is based on homeworks and a final exam. Prerequisites: Basic algebra, Introductory logic (first order logic).

Required reading:
- Burris-Sankappanavar: Universal algebra, GTM, Springer, 2001
- G. Gratzer: Universal algebra, 2nd edition, Springer, 2008

Suggested further reading:
- J. Jezek: Universal algebra, lecture notes, 2008