**COURSE DESCRIPTIONS**

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| **Code of course:** BMI-LOTD17-102E, BMI-LOTD-102E.2, BMA-LOTD17-102, BMA-FILD-301.1, BBN-FIL18-301, BBN-FIL-301.1 |
| **Title of course:** Logic lecture |
| **Lecturer:** Márton Gömöri |
| **General aim of the course**:  The course provides an introduction to first-order logic.  **Content of the course**:   * Syntacs of first-order languages * Sets, relations, functions * Semantics of first-order languages * Central logical notions in first-order logic * Deductive systems * Soundness and completeness * First-order theories * Peano arithmetic * Infinite sets and set theory * Löwenheim-Skolem theorem * Limits of first-order logic and the idea of second-order logic   **Grading criteria, specific requirements**:  Oral exam.  **Required reading**:  P. D. Magnus and T. Button, forallx:Cambridge, 2017.  J. Barwise and J. Etchemendy, *Language, Proof and Logic.* CSLI Publications, 2011.  **Suggested further reading**:  H. Halvorson, *How Logic Works: A User's Guide*. Princeton, NJ: Princeton University Press, 2020.  I. Chiswell and W. Hodges, *Mathematical Logic*. Oxford University Press, 2007. |