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| Code of course: **BMI-LOTD17-204E.01, BMA-LOTD17-204.02** |
| Title of course: **Set Theory** |
| Lecturer: **Amitayu Banerjee** |
| **General aim of the course:**  The course assumes some familiarity with the basic concepts and methods of standard first-order logic.  **Content of the course:**  The course provides a philosophical introduction to set theory. The lectures will cover the following topics:   1. informal introduction to Cantor's paradise; 2. naive set thory as a formal system: the classical paradoxes; 3. the axioms of Gödel-Bernays set theory; 4. a reconstruction of the natural numbers; 5. well-ordered classes; 6. ordinal numbers; 7. the axiom of choice; 8. cardinal numbers; 9. finitization of the axiom system; 10. Gödel's constructible universe.   The topics may change during the course, in accordance with student demand.  **Grading criteria, specific requirements:** TBA  **Required reading:**   * [Lecture notes](http://phil.elte.hu/mekis/elements_of_set_theory_mekis_20171211.pdf) (Last updated at December 11.) * Smullyan, R.and Fitting, M., *Set Theory and the Continuum Problem*. Oxford UP, 1996. * Mendelson, E., *Introduction to Mathematical logic*. 4th ed. Springer, 1997. |