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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.
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