MODELS OF SET THEORY

- Codes: BBN-FIL-401E, BMA-LOTD-306E, BMI-LOTD-306E.
- Title: Models of Set Theory
- Lecturer: Amitayu Banerjee
- Location and Time: Room 224, Tuesday 12:00 – 13:30
- Consultation (email): banerjee.amitayu@gmail.com
- General Aim of the course: Getting acquainted with different structures of models of set theory.
- Contents of the course:
  - Sketch of a spectrum of models (eg, the cumulative hierarchy V, countable transitive model M, Almost universal, transitive and Godel closed models of set theory for example L and HOD, forcing extensions $V[G]$, symmetric submodels of $V[G]$).
  - Elementary set theory and constructing cumulative hierarchy of sets V.
  - Reflection principle, Mostowski collapse and countable transitive models.
  - Almost universal, transitive and Godel closed models of set theory with special emphasis to constructive hierarchy (L) and hereditarily ordinal definable sets (HOD).
- Examination and evaluation system: Oral examination. Basic questions + Presenting a topic with full proof done in class.
- Bibliography: Chapters 1, 2, 6, 12 of Jech's book on *Set Theory*.

REFERENCES

[1] Thomas Jech (2003). *Set Theory, Springer Monographs in Mathematics*. Springer-Verlag, Berlin. The Third millennium edition revised and expanded. MR1940513.