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| Code of course:  |
| Title of course: **Models and Theories** |
| Title of course (in Hungarian): **Modellek és elméletek** |
| Lecturer: **Gábor Hofer-Szabó** |
| **General aim of the course**:In modern science, models and theories play an indispensable role. But what are they? How do they relate to one another? How do they represent their target system? By analogy, by similarity, by isomorphism? What is abstraction, approximation and idealisation? What is the inner structure of a scientific theory and what is the ontology of the models?**Content of the course:**1. Models in Science: Introduction
2. The Received View
3. Models in the Received View
4. Theoretical and Observable
5. Explicit and Implicit Definitions
6. The Model-Theoretical View
7. Scientific Representation
8. Munich Structuralism
9. Analogies
10. Abstraction, Approximation, Idealisation
11. Limits
12. The Ontology of Models

**Grading criteria, specific requirements:**(1) Active participation in the course, 2) short weekly assignments, 3) oral exam.**Suggested reading:**-- R. Frigg, *Models and Theories*, London and New York, Routledge, 2023.-- R. Frigg and S. Hartmann, *Models in Science*, Stanford Encyclopedia of Philosophy, 2020. |