Course: Relativity and Cosmology I

Lecturers: C. Kiefer
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Requirements for participation:
Training in theoretical physics at the B.Sc. level

Type of module examinations:
Written or oral examination and one oral examination at the end of the module

Duration of the course:
1 semester

Aims of the course:
Introduction into Einstein's theory of general relativity and its major applications

Contents of the course:
- Gravity as a manifestation of geometry
- Differential geometry I
- Einstein field equations
- Experimental tests
- Gravitational waves
- Schwarzschild solution

Recommended literature:
1. J. B. Hartle, *Gravity: An introduction to Einstein's general relativity*
2. S. Carroll, *Spacetime and Geometry*