

Module:	Elective Advanced Lectures: BCGS Courses
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Module No.: physics70d

Course:**Relativity and Cosmology I (T)****Course No.:**

Category	Type	Language	Teaching hours	CP	Semester
Elective	Lecture with exercises	English	4+2	8	WT

Requirements for Participation:**Preparation:**

Training in theoretical physics at the B.Sc. level

Form of Testing and Examination:

Written or oral examination

Length of 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

Introduction to differential geometry

Einstein field equations

The Schwarzschild solution

Experimental tests

Gravitational waves

Recommended Literature:

T. Padmanabhan, Gravitation: Foundation and Frontiers

J. B. Hartle, Gravity: An introduction to Einstein's general relativity