

**Modules:** physics700 **Elective Advanced Lectures**  
physics730 **Theoretical Physics**

**Course:**  **Supersymmetry (T)**

**Course No.:** physics761

Category	Type	Language	Teaching hours	CP	Semester
Elective	Lecture with exercises	English	3+1	6	WT/ST

**Requirements:**  
Quantum Field Theory I

**Preparation:**

**Form of Testing and Examination:**  
Individual Oral Examinations

**Length of Course:**  
1 semester

**Aims of the Course:**

Teach the students the basics of supersymmetric field theory and how it can be tested at the LHC.

**Contents of the Course:**

Superfields; Supersymmetric Lagrangians; MSSM; Testing the MSSM at the LHC

**Recommended Literature:**

Theory and phenomenology of sparticles: An account of four-dimensional N=1 supersymmetry in high energy physics.

M. Drees, (Bonn U.) , R. Godbole, (Bangalore, Indian Inst. Sci.) , P. Roy, (Tata Inst.) . 2004. 555pp. Hackensack, USA: World Scientific (2004) 555 p.

Weak scale supersymmetry: From superfields to scattering events.

H. Baer, (Florida State U.) , X. Tata, (Hawaii U.) . 2006. 537pp. Cambridge, UK: Univ. Pr. (2006) 537 p.