Supersymmetry

The course provides a first introduction to supersymmetry and its phenomenological applications.
In the first part we construct the formalism and describe the novelties of supersymmetric models
with respect to ordinary field theories.
In the second part we discuss possible phenomenological applications for particle physics,
discussing the Minimal Supersymmetry Standard Model.

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Syllabus:

Introduction
The Susy algebra
Representations
Actions: Minimal ingredients
Gauge Interactions, non minimal models
Supersymmetry breaking
Naturalness and Soft Supersymmetry breaking
The Minimal Supersymmetric Standard Model
A cursory look to N=1 Supergravity