

# Content



Lecture Course in the Integrated Research Training Group (IRTG)  
of the SFB 676 "Particles, Strings and the Early Universe"

Winter Term 2016/2017

## Experiments on Physics beyond the Standard Model

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### Course Description:

This lecture will provide an introduction of experimental aspects on physics beyond the Standard Model. The following topics will be covered:

### Prerequisites:

Knowledge on particle physics on the level of a bachelor degree in physics is recommended, but not absolutely necessary.

**Date and Place:** Tuesdays, 10:15 – 11:45, Jungiusstr. 11, Hrs AP

**Starting on:** 18.10.2016

- The Standard Model of particle physics and its shortcomings
- Supersymmetry
- Grand Unified Theories
- Compositeness
- CP violation
- Exotic neutrinos
- Searches for dark matter
- Future colliders

# Organisation

- **Exercises in experiments on physics beyond the Standard Model**
  - presentations of a topic based on original publications
  - topics referring to those discussed in lecture
  - presentations concentrated on one day: Tuesday, 07 February 2017
  - topics will be distributed on: Tuesday, 06 December 2016
- **who will need grades? – everybody**
- **English or German? – English**
- **which lectures have you attended before? – Physics V or more, but comprehensive introduction to Standard Model is given**