Degree: M.Sc. in Physics (PO von 2014)

Module: Specialization: Advanced Theoretical Physics

Module No.: physics62c

Course: Advanced Theoretical Hadron Physics

Course No.: physics637

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<th>Category</th>
<th>Type</th>
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Requirements for Participation:

Preparation:
physics616 (Theoretical Hadron Physics)

Form of Testing and Examination:
Requirements for the examination (written): successful work with the exercises

Length of Course:
1 semester

Aims of the Course:
Survey of methods of theoretical hadron physics in regard to current research

Contents of the Course:
Quantum Chromodynamics: Nonperturbative Results, Confinement
Lattice Gauge Theory
Chiral Perturbation Theory
Effective Field Theory for Heavy Quarks

Recommended Literature:
F. E. Close; An Introduction Quarks and Partons (Academic Press 1980)
C. Itzykson, J.-B. Zuber; Quantum Field Theory (Dover Publications 2006)
S. Weinberg; The Quantum Theory of Fields (Cambridge University Press 1995)

September 2008