

Physics of Hadrons - physics632

<i>Course</i>	Physics of Hadrons
<i>Course No.</i>	physics632

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

Requirements for Participation:

Preparation: Completed B.Sc. in Physics, with experience in electrodynamics, quantum mechanics, atomic- and nuclear physics

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

Length of Course: 1 semester

Aims of the Course: Understanding the many-body structure of hadrons, understanding structural examinations with electromagnetic probes, introduction into experimental phenomenology

Contents of the Course:

Structure Parameters of baryons and mesons; hadronic, electromagnetic and weak probes; size, form factors and structure functions; quarks, asymptotic freedom, confinement, resonances; symmetries and symmetry breaking, hadron masses;

quark models, meson and baryon spectrum; baryon spectroscopy and exclusive reactions; missing resonances, exotic states

Recommended Literature:

B. Povh, K. Rith C. Scholz, F. Zetsche; Teilchen und Kerne (Springer, Heidelberg 6. Aufl. 2004)

Perkins; Introduction to High Energy Physics (Cambridge University Press 4. Aufl. 2000)

K. Gottfried, F. Weisskopf; Concepts of Particle Physics (Oxford University Press 1986)

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