

<b>Module:</b>	<b>Elective Advanced Lectures: Experimental Physics</b>
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Module No.: physics70a

<b>Course:</b>	 <b>Experiments on the Structure of Hadrons (E)</b>
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Course No.: physics715

Category	Type	Language	Teaching hours	CP	Semester
Elective	Lecture with exercises	English	2+1	4	WT

**Requirements for Participation:****Preparation:**

Completed B.Sc. in Physics, with experience in 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 structure of the nucleon, understanding experiments on baryon-spectroscopy, methods of identifying resonance contributions, introduction into current issues in meson-photoproduction

**Contents of the Course:**

Discoveries in hadron physics, quarks, asymptotic freedom and confinement; multiplets, symmetries, mass generation; quark models, baryon spectroscopy, formation and decay of resonances, meson photoproduction; hadronic molecules and exotic states

**Recommended Literature:**

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

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

A. Thomas, W. Weise, The Structure of the Nucleon (Wiley-VCH, Weinheim, 2001)