

Primary Area of Specialization: Nuclear and Particle Physics

Module No.: MN-P-SP-Nuc

Course: Groundbreaking Experiments in Nuclear Physics

Lecturers: J. Jolie

Email: jolie@ikp.uni-koeln.de

Category	Type	Language	Teaching Hours	CP	Semester
Specialized Course	Lecture	English	2	3	ST

Requirements

Preparation:

Basic Knowledge in Nuclear Physics

Form of Testing and Examination:

Part of courses for area of specialisation Nuclear and Particle Physics, separate oral examination is possible exceptionally.

Length of Course:

1 semester

Aims of the course:

Study of original publications of fundamental experiments in nuclear physics. The students should participate actively in the course.

Contents of the course:

- Discovery of radioactivity
- Rutherford and his many discoveries using alpha sources
- The discovery of the neutron and deuteron
- Determination of magnetic moments
- Hofstadter's electron scattering experiments
- The use of cosmic rays to discover mesons
- Fermi work in neutron physics
- Properties of neutrinos
- Mößbauereffekt

Recommended literature:

Will be distributed during the course.