Nuclear Reactor Physics (A) - physics775

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

Module	**Elective Advanced Lectures: Applied Physics**
Module No.	physics70b

Course	**Nuclear Reactor Physics (A)**
Course No.	physics775

Category	**Type**	**Language**	**Teaching hours**	**CP**	**Semester**
Elective	Lecture	English	2	3	ST

Requirements for Participation:

Preparation: Fundamental nuclear physics

Form of Testing and Examination: Written or oral examination

Length of Course: 1 semester

Aims of the Course: Deeper understanding of nuclear power generation (fisson and fusion)

Contents of the Course:

Physics of nuclear fission and fusion, neutron flux in reactors, different reactor

types, safety aspects, nuclear waste problem, future aspects

and

Excursion to a nuclear power plant

Recommended Literature:

H. Hübel: Reaktorphysik (Vorlesungsskript, available during the lecture)

M. Borlein: Kerntechnik, Vogel (2009)

W. M. Stacey: Nuclear Reactor Physics, Wiley & Sons (2007)