

Modules:

physics700 **Elective Advanced Lectures**
 physics720 **Applied Physics**

Course:**Nuclear Reactor Physics (A)**

Course No.: physics775

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

Requirements:**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 (fission 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)