

## Nuclear Reactor Physics (A) - physics775

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| <i>Course</i>     | Nuclear Reactor Physics (A) |
| <i>Course No.</i> | 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)

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