



Universität Ulm

Master of Science Physics (PO 2017)

Nuclear Technology

Code 8812871588

ECTS credits 4

Attendance time 4

Language of instruction German

Duration 1 Semester

Cycle each Winter Semester

Coordinator Dean of Physics Studies

Instructor(s) Prof. Thomas Raiber

Allocation of study programmes Physics M.Sc., elective module, 1st or 2nd semester
Wirtschaftsphysik M.Sc., elective module, 1st-3rd semester

Recommended prerequisites Basic knowledge in Atomic Physics and Nuclear Physics

Learning objectives Students who successfully pass this module

- know and understand the operation of power plants
- are able to estimate independently the sustainability of nuclear energy

Syllabus

- Foundations of Nuclear Technology
- Types of reactors (worldwide)
- SWR und DWR reactors
- EPR (European pressurized water reactor)
- Fusion reactor
- Chernobyl accident
- Safety in nuclear power plants
- Fuel cycle and waste management

Literature

Teaching and learning methods

Lecture (2 hours per week)

Lab practice with training reactor (2 hours per week)

(The courses are held at the Hochschule Ulm, H205, Prittwitzstr. 10)

Workload

30 hours lecture (attendance time)

30 hours laboratory course (attendance time)

60 hours self-study and exam preparation

Total: 120 hours

Assessment

The grade of the module will be the grade of the written exam. Prerequisite for exam registration is passing the pre-course (to be defined by the examiner).

Grading procedure

The grade of the module will be the grade of the exam.

Basis for
