

# Nuclear and Particle Physics

Module No.: MN-P-SP-Nuc, MN-P-PN-Nuc, MN-P-WaMa

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## Course: Applied Nuclear Physics

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

### Requirements for participation:

Basic Knowledge in Nuclear Physics

### Type of module examinations:

One oral examination at the end of the module

### Duration of the course:

1 semester

### Aims of the course:

The aim of this course is to introduce the basics of how radiation interacts with matter and to give some insight into the applications and techniques where radioactivity is used or techniques developed first in Nuclear Physics are applied in different fields of science and technology.

### Contents of the course:

- Radiation and interaction with matter
- Detecting radioactivity
- Radioactive dating
- Nuclear methods for analysis of materials
- Mößbauer spectroscopy
- Nuclear medicine
- Nuclear energy

### Recommended literature:

K. S.Krane, Introductory Nuclear Physics, John Wiley & Sons

W.T. Hering, Angewandte Kernphysik, Teubner Studienbücher Physik

Y. M. Tsipenyuk, Nuclear Methods in Science and Technology, Institute of Physics Publishing Bristol and Philadelphia