### Module title
Modern Physics 3 (Nuclear, Particle and Astrophysics)

| Abbreviation | 11-L-M3-152-m01 |

### Module coordinator
Managing Director of the Institute of Applied Physics

### Module offered by
Faculty of Physics and Astronomy

### ECTS
6

### Method of grading
numerical grade

### Duration
2 semester

### Module level
undergraduate

### Other prerequisites
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### Contents
Nuclear Physics: experimental methods, detectors, structure of the atomic nucleus, radioactivity, nuclear fission, technical and medical applications, radiation protection. Elementary Particle Physics: Particle accelerator, classification of elementary particles, fundamental interactions. Astrophysics: Stellar development, structure of the Sun, cosmology.

### Intended learning outcomes
The students have structured knowledge of the aforementioned terms; they know relevant key concepts and experiments as well as measuring methods and dimensions of central values; they are able to work on simple relevant problems in a quantitative manner.

### Courses
V (3) + Ü (1)

Module taught in: Ü: German or English

### Method of assessment
written examination (approx. 90 to 120 minutes)

Language of assessment: German and/or English

### Allocation of places
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### Additional information
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Referred to in LPO I
§ 77 I Nr. 1 b)

### Module appears in
First state examination for the teaching degree Gymnasium Physics (2015)
Master’s teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2016)