# Module description

## Module title

**Introduction to Space Physics**

**Abbreviation**

11-ASP-161-m01

## Module coordinator

Managing Director of the Institute of Theoretical Physics and Astrophysics

## Module offered by

Faculty of Physics and Astronomy

## ECTS

6

## Method of grading

Numerical grade

## Only after succ. compl. of module(s)

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## Duration

1 semester

## Module level

Graduate

## Other prerequisites

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## Contents

1. Overview
2. Dynamics of charged particles in magnetic and electric fields
3. Elements of space physics
4. The sun and heliosphere
5. Acceleration and transport of energetic particles in the heliosphere
6. Instruments to measure energetic particles in extraterrestrial space

## Intended learning outcomes

The students acquire basic knowledge of Space Physics, in particular regarding the characterisation of the dynamics of charged particles in space and the heliosphere. They know relevant parameters and theoretical concepts and corresponding measuring methods.

## Courses

**Type, number of weekly contact hours, language — if other than German**

V (3) + R (1)

Module taught in: German or English

## Method of assessment

**Type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus**

Written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or presentation/talk (approx. 30 minutes).

If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest.

Assessment offered: In the semester in which the course is offered and in the subsequent semester

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

(examination regulations for teaching-degree programmes)

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## Module appears in

- Master’s degree (1 major) Mathematics (2016)
- Master’s degree (1 major) Physics (2016)
- Master’s degree (1 major) Nanostructure Technology (2016)
- Master’s degree (1 major) Computational Mathematics (2016)
- Master’s teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2016)
- Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2016)
- Master’s degree (1 major) Computational Mathematics (2019)
Master's degree (1 major) Mathematics (2019)
Master's degree (1 major) Nanostructure Technology (2020)
Master's degree (1 major) Physics (2020)