## Module description

### Module title
Principles of Electronics (with Practical Course)

### Abbreviation
11-N2-092-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

### Only after succ. compl. of module(s)
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### Duration
1 semester

### Module level
undergraduate

### Other prerequisites
Certain prerequisites must be met to qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the course. Registration for the course will be considered a declaration of will to seek admission to assessment. If students have obtained the qualification for admission to assessment over the course of the semester, the lecturer will put their registration for assessment into effect. Students who meet all prerequisites will be admitted to assessment in the current or in the subsequent semester. For assessment at a later date, students will have to obtain the qualification for admission to assessment anew.

### Contents
Principles of electronic components and circuits. Analogous circuit technology: Passive (resistors, capacitors, coils and diodes) and active components (bipolar and field-effect transistors as well as operational amplifiers). Digital circuits: different types of gates and CMOS circuits. Microcontroller

### Intended learning outcomes
The students have knowledge of the practical setup of electronic circuits from the field of analogous and digital circuit technology.

### Courses
(V + P (no information on SWS (weekly contact hours) and course language available)

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

Assessment offered: When and how often assessment will be offered depends on the method of assessment and will be announced in due form under observance of Section 32 Subsection 3 ASPO (general academic and examination regulations) 2009.

### Allocation of places
Only as part of pool of general key skills (ASQ): 15 places. Places will be allocated by lot.

### Additional information
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### Referred to in LPO I
(examination regulations for teaching-degree programmes)

### Module appears in
Bachelor' degree (1 major) Nanostructure Technology (2010)
Bachelor's degree (1 major, 1 minor) Physics (Minor, 2010)