

Symmetries in Physics, winter semester 2020/21

Lecturer: Gernot Akemann

office E5-129, phone (univ): 0521 106 6202, Email: akemann@physik.uni-bielefeld.de

Tutor: Tim R. Würfel, office: E5-136, Email: twuerfel@physik.uni-bielefeld.de

Organisation:

This term all lectures and exercises will take place online

Lectures:

There are handwritten notes available online

<https://www2.physik.uni-bielefeld.de/3448.html>

The first lecture is on Tuesday October 27th. During lecture hours, that is

Tuesdays 10:15-11:45 and Fridays 10:15-11:45

we will read through will read the material, interrupted by the opportunity to ask questions, discussion and additional explanations. The link to the zoom session will be provided by email via ekVV. Should you face any technical problems you may try to contact me via phone. Additionally, I am always available for feedback and question by email.

There will be no lecture on Friday December 18th.

Exercises:

The first exercise will be on Monday, November 2nd. During exercise hours, that is

Mondays 14:15-15:45

During Tutorial sessions the tutor will provide either short exercises (Präsenzübungen) for the students to solve or discussion topics (closely related to the lecture) with material for the students to read.

All materials will be provided via LernraumPlus, which can be accessed via ekVV:

Go to ekVV "Übungen - Symmetries in Physics" -> Lernraum -> LernraumPlus

The short exercises will be solved by the students in small groups (break-out rooms in Zoom) in an interactive way, with the possibility to ask questions to the tutor.

The discussion topics will be given to the students to read during the tutorial and then a short list of questions will be provided by the tutor that the students have to answer. This will prepare the students for the oral exam at the end of the semester.

During the tutorial sessions, the tutor will ask 1 or 2 of the students to sketch the solution of the homework exercises that were handed in the week before and to answer questions about it, to him only, again using break out rooms in zoom. The link to the zoom tutorial sessions will be provided by email via ekVV and LernraumPlus.

Starting from week one, that is from October 27th, homework exercises will be posted here <https://www2.physik.uni-bielefeld.de/3448.html> after the lecture as well as in LernraumPlus. The solutions shall be worked out by the students individually, to be uploaded on LernraumPlus. The marked and corrected solution will be handed back via LernraumPlus, where sketches of the solution shall be posted too.

A successful participation in the exercises includes:

- to achieve at least 50% of the points in the homework exercises, spread over the entire term
- to actively take part in the tutorial exercise sessions, through questions, comments or participating in finding solutions.
- to actively take part in the question sessions for the discussion topics by reading the provided material and answering the provided questions.
- to have presented at least 1-2 times the own solution of the homework exercises to the tutor that were handed in (the tutor will make sure that enough such opportunities are given to the students)

Exam:

After the end of lectures, last lecture is on February 12th 2021, possible dates for an oral exam will be made available.