

Hints on the Advanced Lab Course

In the Advanced Lab Course you will carry out and analyze experiments, which have been specially chosen to teach you important physical facts and to introduce you into measurement methods often used as well as the variety and heterogeneity of physical problems and experiments.

Each experiment is scheduled for one day of the course. The preparation and the post-processing should not exceed 3 – 4 days. The schedule of the Advanced Lab Course should not affect the successful participation of the other courses of the first and second semester of your Master study which requires that you already gained a sufficient basis of physical fundamentals during your bachelor study by attending lectures and by self-study. The Advanced Lab Course spans one semester as well as about three weeks in the free period. It should be scheduled for the **first or second semester of your Master study**. One part takes place each Monday during the term, the other part builds a block course during the free period.

You have to carry out **eight experiments in total**. The experiments last a whole day and start punctually at 8:30 am. These are the rooms and labs:

0.1.29, 0.4.02, 0.4.05, 0.4.07, 0.4.09, T 0.1.01a, 1.4.24
and the labs of the involved groups: 0.3.23, 0.4.17, 1.1.43, 1.2.21, 1.2.39, 1.1.52

The experiments are carried out typically in groups of two students (in special circumstances there are groups of three students) and should be completed within one day. For each experiment the supervisor will attest its execution; he/she will moreover attest the successful conclusion.

The Advanced Lab Course will be successfully completed after **8 experiments** (divided between term and block experiments), **participation to the seminars** and **one presentation**.

The final grade for this course will be the arithmetic average between the grades of the eight experiments and the grade of the seminar presentation (double weighted).

Even if the students can express their preferred topic and date for the seminar presentation, the supervisor holds the right to organise the dates and arguments if necessary.

By the beginning of the course the experiment calendar will be published on the web (<http://www.physik.fu-berlin.de/studium/praktika-forward/index.html>) and on the board in the corridor of room 0.4.07. Some experiments are not allowed for pregnant women: They are marked by "n.s." (not for pregnant).

On the web page of the course you will also find a template of the **FP participation paper (Laufzettel)**. There you have to record all your experiments with their corresponding dates as well as your seminar presentation. The marks for the experiments will be written on the participation paper as well as on the report. After the last certification, in any case **four weeks after the end of the term** at the latest the participation paper has to be handed out to the course organizer. This

participation paper is the basis for your final mark which will be entered in the Campus Management. In case the four week deadline will be not respected the course has not been successfully passed unless the students can justify their delay.

The seminar participation is mandatory for the students. It takes place each Monday at 5 pm in room 1.1.16 (FB room). The presentations should give a certain overview of the physical topics relevant for the experiments and moreover should extend and deepen the knowledge of those topics. **The seminar is an integral part of the Advanced Lab Course**, since in general the supervisors of the experiments don't have enough time to explain the content in detail during the experiment session. This is the reason why the seminar participation is mandatory. In case you skip the seminar more than two times without justification, you should prove to the organizer of the course your knowledge to obtain the final mark. As presenter you should learn to communicate to your audience physical questions, basics and results of experiments you have performed and your literature research. For the preparation of your talk please consult the hints on the seminar presentation.

Constructive critics as well as stimulations and suggestions for improving the Advanced Lab Course are very welcome.