

Practical Course Laser Engineering – Project Work

Ulrich Wittrock and Hardo Stoehr

Münster University of Applied Sciences, Photonics Laboratory, Practical Course Laser Engineering

12.09.2012, version: 05

In this practical course you will carry out a small development project by yourself aiming at introducing you to industrial working in research and development. As each project will be different, the following instructions have only a general character.

1. Execution

Typically you will work on a project in a team of two persons. Your tutor will be a scientist from the Photonics Laboratory. The working hours should be in line with the times stated in your study schedule. If necessary for the work, other times are possible, e.g. often, a doubling of the working hours to a 14 day interval is reasonable. For any changes of the time schedule please contact your tutor.

2. Security

To work with lasers in the Photonics Laboratory you need to pass a laser safety course. Students who did not take part in such a course shall contact the supervisor of the laboratory course before practical exercises are starting.

You are obliged to observe the rules stated in the laboratory policy. The laboratory policy is available on the backside of the entrance door of each laboratory room and can also be downloaded via the internet [1].

If several persons are working in the laboratory at the same time, arrangements are necessary to ensure laser safety of each person.

Please be aware of the fact that you are working with lasers and optical components which are of considerable value and which may be easily destroyed by negligence.

3. Measurement protocol and report

The practical course Laser Engineering closes with a 10 minutes PowerPoint presentation of each participant. All students will be present during the presentations of their fellow students. It is therefore important to provide a short introduction into the subject to allow the other students to understand the background and target of the project. The introduction is followed by a description of the approach and the results.

The presentation should comprise a maximum of 10 slides and the font size should be at least 18 pt. Hints on how to create a presentation can be found in [2]. This book is available in the library in Steinfurt.

In addition to the presentation you have to provide a written report which shall not exceed 5 pages. If

required, you may enclose further material in the annex of your report. Very good advice on how to write a report is given in [3]. This book is available in the library in Steinfurt. The report has to be supplied prior to the Christmas break, and you will retrieve it at the beginning of the new year. The presentation date will be approximately one week later.

4. Literature

- [1] Laboratory policy of the Photonics Laboratory, see www.photonics-lab.de
- [2] H. F. Ebel, C. Bliefert: *Vortragen in Naturwissenschaft, Technik und Medizin*, Wiley-VCH (2004).
- [3] H. F. Ebel, C. Bliefert, W. E. Russey: *The art of scientific writing – from student reports to professional publications in chemistry and related areas*, Wiley-VCH (2004).
- [4] W. E. Russey, H. F. Ebel, C. Bliefert: *How to write a successful science thesis*, Wiley-VCH (2006).
- [5] W. E. Russey, C. Bliefert, C. Villain: *Text and graphics in the electronic age - desktop publishing for scientists*, VCH (1995).