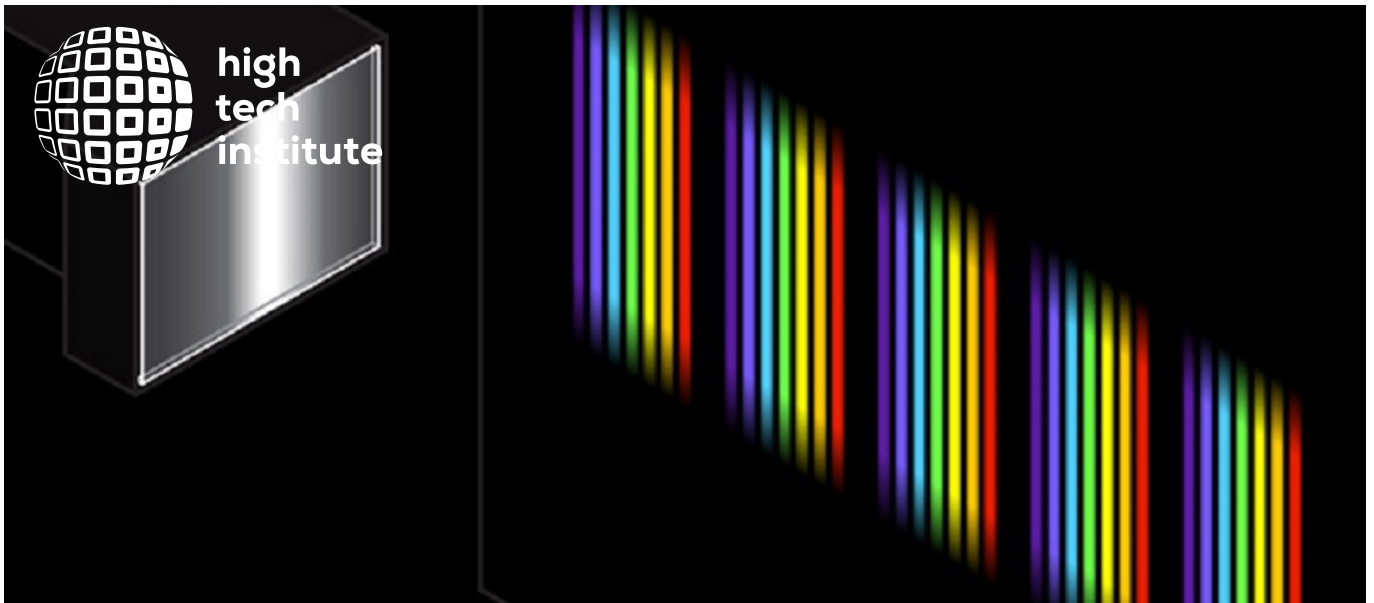


## TRAINING BROCHURE

# Course on Modern optics for optical designers - part 1



[Provisional reservation >](#)

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## Modern optics for optical designers - part 1

**Price:** € 3,750 excl. VAT \*

**Duration:** 15 weekly morning sessions

**Contact:** [training@hightechinstitute.nl](mailto:training@hightechinstitute.nl), +31 85 401 3600

**Score:** 8.2 ★★★★★☆

### Intro

Optics is the 'enabling technology' of the 21st century. To design optical systems, to specify and test optical components, to integrate optical components into products, requires knowledge and skills that can be learned in this Course on Modern Optics for Optical Designers (CMOP).

Over the years the CMOP course has become one of the most comprehensive optical courses in Western Europe, unique in its concept, covering the theoretical basics, practical optical system design and a broad overview of optical applications.

This Course on Modern Optics for Optical Designers is composed of two parts. Part 1 discusses the basics of optics and a number of applications. Part 2 discusses optical system design.

### Objective

After completion of both parts of the course, the participant will have a thorough knowledge of modern optical concepts, their applications and the design of optical systems, the engineering problems and solutions.

### Intended for

The course is intended for optical designers working in research and development of optical systems. Educational level should be technical university (MSc in physics, electronics, mechanics). Prerequisite: a basic knowledge of optics and practical experience in optical systems.

### Certified by



### Certification

This course is certified by [the European society for precision engineering & nanotechnology \(euspen\)](#) and [the Dutch Society for Precision Engineering \(DSPE\)](#) and leads to the [ECP2-certificate](#) if results are sufficient.

### Course leader

[Hans Vink MSc](#)

### Trainers

[Dr. Seth Brussaard](#)  
[Dr. Jo Finders](#)  
[Dr. Stefan Bäumer](#)  
[Peter Harmsma](#)

*\* Prices are subject to change. Price correction will be applied at the end of the year.*

Keep me posted



## Program

### Part 1

*Optical basics (8 lessons):*

- Electromagnetic theory;
- Polarization;
- Light & matter;
- Exercises, Q&A;
- Diffraction;
- Image formation & assessment;
- Gratings;

*Applications (7 lessons):*

- Diffraction & micro-optics;
- Waveguiding and lasers;
- Lithography;
- Non-linear optics;
- Biomedical photonics.

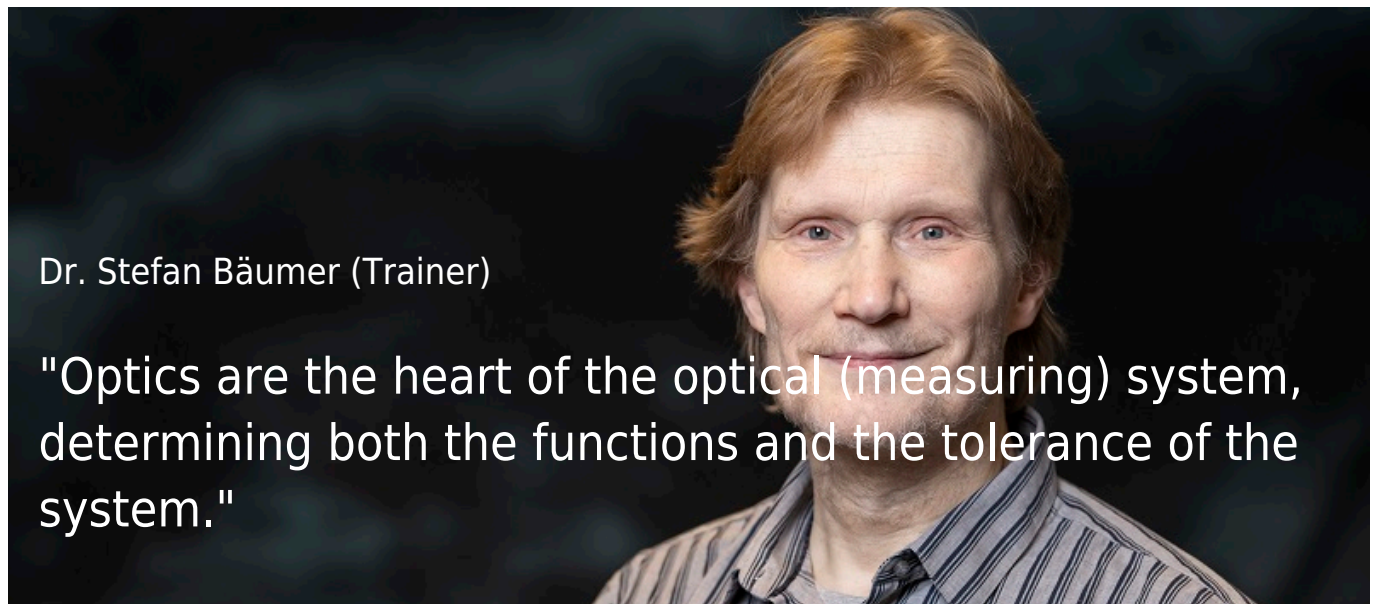
The length of each Part of the CMOP course is 15 half days from 9:00 AM till 12:00 AM in a period of 25 weeks. Study load excluding class sessions: homework 6 - 8 hours a week.

### Methods

Lectures, self-study, individual assessments, group assignments, tour.

Course material: course notes and books.

Read the interview:



Dr. Stefan Bäumer (Trainer)

"Optics are the heart of the optical (measuring) system, determining both the functions and the tolerance of the system."

Remarks from participants:

- 'Great course. The assignments and group projects were also very good and addressed the most important aspects of the course. I did not find it difficult to keep up with the material at all.' > Lotte Romijn - University of Technology Eindhoven
- 'Thanks for making this training! It was difficult but I learned a lot.' > Andrey Rogachevskiy , ASML
- 'Although my background is in physics, I never felt I really knew about optics. After this course I have a better understanding of how broad optics is. Now I know better what I do not know.' > Anneke van Dusschoten - Philips

Electronics Netherlands

- 'Most important items I've learned: Polarisation and the mathematics about it, illumination very interesting.' > Peter Giesen , TNO
- 'Most important items I've learned: Lithography, interferometry, lens aberrations, non imaging optics.' > Roberto Pagano , ASML