



Seminar: Principles of Optical Metrology (2 SWS)

Courses: Electrical Eng. Master,
ECE Master in combination with Optical Metrology Lab.

Requirements: Basics in Optics and Measurement Technology

Each attendee chooses one of the topics below
and prepares a 40 minutes lecture.

Topics:

1. Wave Optics, Wave Phenomena and Propagation
2. Diffraction, Diffractive Optical Elements and Applications
3. Fourier Optics and Optical Systems
4. Imaging and Vision Systems based on Digital Image Processing
5. Confocal Microscopy and Applications in Material Science
6. Atomic Force and Scanning Near-Field Optical Microscopy
7. Length Measuring Interferometry
8. Fiber Optic Sensors and Applications
9. Microoptics and Adaptive Optics in Measurement Systems
10. Speckles and Light Scattering in Optical Measurement
11. Digital Holography, Digital Holographic Microscopy
12. Microscopic Imaging and Optical Resolution*
13. Interference Microscopy*
14. The Optical Transfer Function*

ECE Master students combine the seminar with an Optical Metrology Lab.

*Presentation given by measurement technology group members