Weekly Schedule Laser Metrology SS 2025

Presence + Videos Opal (records)

Lecture: Monday, 6. DS., 16:40 – 18:10 Uhr, BAR 218 (marked black)
Excercise: Tuesday 6. DS., 16:40 – 18:10 Uhr, BAR 106 (marked blue)

Week		Lecture		Excercise	
Nr.	**CW**	**Date**	**Monday, 6. DS**	**Datum**	**Tuesday, 6. DS**
1	15	07.04.	Lecture 1: 1. Introduction 2. Light propagation	08.04.	Excercise 1: Wave equation
2	16	14.04.	Lecture 2: Gaussian Beam, Fourieroptics I	15.04.	Excercise 2: Jones matrix formalism
3	17	21.04.	**– Easter / Ostern –**	22.04.	Lecture 3: Fourier Optics II
4	18	28.04.	Lecture 4: Confocal sensor, diffractive lens	29.04.	Excercise 3: Gaussian Beam
5	19	05.05.	Lecture 5: 3. Laser	06.05.	Excercise 4: Keplerian telescope, beam quality factor, focusing
6	20	12.05.	Lecture 6: Coherence and Interference, Michelson-Interferometer	13.05.	Excercise 5: Diffraction: Single and Double Slit, Grating, Abbe Limit
7	21	19.05.	Lecture 7: Laser types and applications	27.05.	Exercise 6: Mode Coupling
8	22	26.05.	Lecture 8: Frequency comb, single frequency laser	03.06.	Excercise 7: AOM
9	23	02.06.	Lecture 9: 4. Interferometry: Michelson, Sagnac, Gravitation wave detection and measurement, Holography	10.06.	Excercise 8: Fabry-Perot Interferometer / Resonator
	24		**– Pentecoast / Pfingsten –**		**– Pentecoast / Pfingsten –**
10	25	16.06.	Lecture 10: 5. Fiber sensor, propagation of waves in fibers, technical aspects	17.06.	Lecture 11: Intrinsic und extrinsic fiber sensors, Measurement values: Temperature, Strain, Electrical current
11	26	23.06.	Excercise 9: Faraday Effect, Isolator, Sagnac Interferometer	24.06.	Excercise 10: Optical waveguides
12	27	30.06.	Lecture 12: Bragg-Fiber sensors, Rayleigh/Raman/Brillouin	01.07.	Excercise 11: Brillouin Scattering
13	28	07.07.	Lecture 13: 6: Quantum Technology of Second Generation: Quantum Imaging, Communication-Quantum Key Distribution, teleportation, entangled photons	08.07.	Excercise 12: Beam splitter for quantum states
14	29	14.07.	–	15.07.	Excercise 13: Quantum Mach-Zehnder Interferometer