

Level: PhD				
Course title: Laser plasma diagnostics				
Status: elective				
ECTS: 15				
Requirements: Master in Plasma physics				
Learning objectives The knowledge about plasma diagnostics methods based on laser application.				
Learning outcomes Abilities: <ul style="list-style-type: none"> - General: Ability for professional and scientific activities in the field of plasma diagnostics using lasers. - Specific: Ability for setting up and performing the experiments. Application of different methods based on laser methods for plasma diagnostic purposes – plasma electron density and temperature determination. Ability to discuss the results obtained. Inclusion in scientific and industrial processes based on plasma technologies. 				
Syllabus Interferometers. Refractive index of plasma. Plasma characterization by measuring refractive index. Schlieren method. Shadow Method. Plasma interferometry using photoelectric determination. Laser interferometers. Investigation of magnetoactive plasmas utilizing rotation of polarizing plane. Plasma parameters determination from interferograms. Holographic interferometry. Plasma investigation from light scattering. Interaction between electromagnetic waves and plasma. Technique of scattering experiments. Detection of scattered spectra.				
Weekly teaching load				Other:
Lectures: 4	Exercises:	Other forms of teaching:	Student research: 6	