

<b>Level:</b> PhD				
<b>Course title:</b> Plasma sources and experimental techniques				
<b>Status:</b> elective				
<b>ECTS:</b> 15				
<b>Requirements:</b> -				
<b>Learning objectives</b> Introduction to the laboratory plasma sources and experimental techniques with using plasma sources.				
<b>Learning outcomes</b> Upon completion of the course, students should possess: <ul style="list-style-type: none"> <li>- General abilities: Understanding and acquiring general physical laws in plasma state.</li> <li>- Subject specific abilities: Understanding the principles of various laboratory plasma sources and techniques of working with them.</li> </ul>				
<b>Syllabus</b> <i>Theoretical instruction</i> The production of laboratory plasmas. Plasma heating methods. Plasma sources: wall stabilized arc, pulsed arc, theta pinch. Z - pinch. T - tube. Laser produced plasmas. Nonequilibrium plasmas. RF plasmas. Astrophysical plasmas. Fusion plasmas. Magnetic confinement. Inertial confinement. Experimental and diagnostic techniques in plasma physics. Gas systems. Electrical systems. Triggering methods. Optical systems. Radiation detectors. Spectral devices. Spectral line recording techniques. <i>Practical instruction</i> Exercises are based on the theoretical part. Exercises on plasma sources available in a plasma physics laboratory (wall stabilized arc, T - tube)				
<b>Weekly teaching load</b>				Other:
Lectures: 6	Exercises:	Other forms of teaching:	Student research: 4	