

<b>Level:</b> master				
<b>Course title:</b> History and Philosophy of Physics				
<b>Status:</b> obligatory				
<b>ECTS:</b> 6				
<b>Requirements:</b> none				
<b>Learning objectives</b> Understanding of the historical laws underlying the development of sciences, physics in particular. Recognition of the philosophical standpoints of scientists and their influence on the interpretation of the scientific results.				
<b>Learning outcomes</b> After taking the course, the student should have developed: <b>General capabilities:</b> basic knowledge of this field, following the literature, analysis of various influences of historic circumstances to the development of physics. <b>Subject-specific capabilities:</b> using the examples from the history of physics in teaching; recalling the biographies of great scientists for education purposes; observing the flaws in students reasoning relating them to examples from the history of physics.				
<b>Syllabus</b> <i>Theoretical instruction</i> Early period of the development of science. Physics between religion and philosophy. The rise of mechanics interacting with astronomy and mathematics. Optics: the conflict between particle and wave concept. Electricity and magnetism: a step from statics towards dynamics. Thermodynamics and kinetic theory of matter: from phenomenology to sophisticated theory. Particles and fields: development in cycles. Quantum mechanics and relativity: the need for a new approach to understanding of the Nature.  <i>Practical instruction</i> Two seminars.				
<b>Weekly teaching load</b>				Other:
Lectures: 3	Exercises: 1	Other forms of teaching: 1	Student research:	