

<b>Level:</b> PhD				
<b>Course title:</b> Advanced course of modelling of the physical processes in the atmosphere				
<b>Status:</b> elective				
<b>ECTS:</b> 15				
<b>Requirements:</b> M.Sc. degree				
<b>Learning objectives</b> Introductory to physical processes in planetary boundary layer, which are important in every environmental model. Getting knowledge in modern parts of meteorology and environmental sciences.				
<b>Learning outcomes</b> After this course, a Ph.D. student should have: <ul style="list-style-type: none"> <li>- knowledge on fundamental processes and equations of those processes in the atmosphere, basic principles of parameterization and their application in environmental models,</li> <li>- ability to use technical literature and to write scientific material (presentations, writing abstracts, proceedings and scientific papers),</li> <li>- capacity to create and design environmental models, and use them in practice.</li> </ul>				
<b>Syllabus</b> Introduction. Modelling of the surface processes. Energy transport within various media and its parametrization. Parametrization schemes for surface processes. Equations for the transport of meteorological quantities in the boundary layer. Parametrization of wet processes. Parametrization of the processes in the atmospheric boundary layer in the models of control of the air and chemical transport of polutanats. Modelling of the atmospheric radiation.				
<b>Weekly teaching load</b>				<b>Other:</b>
<b>Lectures:</b> 6	<b>Exercises:</b>	<b>Other forms of teaching:</b>	<b>Student research:</b> 4	