

<b>Level:</b> PhD			
<b>Course title:</b> Advanced Course of Thermal Analysis			
<b>Status:</b> elective			
<b>ECTS:</b> 15			
<b>Requirements:</b> –			
<b>Learning objectives</b> Thermoanalytical methods and their application in quality control of the selected compounds and materials, the role of thermal analysis materials science, in industrial processes, etc.			
<b>Learning outcomes</b> Acquiring knowledge for analysis of experimental data and their adequate interpretation. Solving problems related to changes in materials under thermal treatment.			
<b>Syllabus</b> <i>Theoretical instruction:</i> The effect of temperature change on the properties of materials. Different techniques of thermal analysis (TA): thermogravimetry (TG) and derivative thermogravimetry (DTG), differential thermal analysis (DTA) and differential scanning calorimetry (DSC), thermomechanical and dynamic thermomechanical analysis (TMA and DMA). Thermometric methods of analysis. Using thermoanalytical data to obtain kinetic parameters. Simultaneous methods of thermal analysis. Analysis of evolved gases (EGD and EGA). <i>Practical instruction:</i> Thermal characterization of the selected compounds and materials. <i>Seminar paper:</i> Evaluation and interpretation of selected experimental data.			
<b>Weekly teaching load</b>			Other:
Lectures: 3	Exercises: 3	Other forms of teaching:	