

Study program	Level of studies		Third cycle	
	Title of the study program		Doctoral studies in physics	
Course title	THERMAL AND STRUCTURAL ANALYSIS OF MATERIALS			
Course ID	Semester	Course status	ECTS credits	Teaching hours
ŠIFRA	I /II	Elective	10	30
Course aims and expected learning outcomes	<p>The aim of the course is to get acquainted with the experimental techniques for thermal and structural analysis.</p> <p>Learning outcomes:</p> <ul style="list-style-type: none"> - understands the theoretical basics of thermal analysis, - understands the theoretical basics of structural analysis, -applies theoretical knowledge in the experimental work. 			
COURSE CONTENT				
<p>Thermal analyzes in general, Differential scanning calorimetry, annealing furnaces in inert and room atmospheres;</p> <p>Structural analysis in general, X-ray diffraction;</p> <p>If necessary, as a complementary technique, a device for measuring the microhardness of materials will be available to the students.</p>				
LITERATURE			ASSESSMENT OF LEARNING	
<p>[1] Michael E. Brown, Introduction to Thermal Anaysis (Techniques and Applications), Kluwe Academic Publisher, 2004, eBook ISBN 0-306-48404-8</p> <p>[2] <u>Mark Ladd, Rex Palmer</u>, Structure Determination by X-ray Crystallography, Springer, 2014, eBook ISBN 978-1-4614-3954-7</p>			Assessment Method	Points
			Seminar paper	100
			Total	100
Remarks				
<p>According to interest and available materials for analysis, the student proposes a research topic, which is confirmed by the instructor. Research must include experimental work in the field of thermal or structural analysis. Research results are written in the form of a scientific paper and presented orally.</p>				