

Level: PhD				
Course title: Corrosion of Materials (DSH-712)				
Status: Elective				
ECTS: 15				
Requirements: None				
Learning objectives Expanding knowledge on the complex problem of corrosion in the modern society. Acquiring advanced knowledge on corrosion of different materials and possibilities of protection from corrosion. Development of skills and abilities to adjust and carry out standard and modified methodologies in solving problems related to corrosion of different materials.				
Learning outcomes After successful completion of this course, students are able to: <ul style="list-style-type: none"> • Thoroughly understand and successfully monitor physical and chemical laws related to corrosion processes of different materials. • Demonstrate comprehensive knowledge and understanding of the advanced facts, concepts, principles and theories from the field of corrosion of different materials. • Consult the relevant literature. • Apply knowledge and understanding of corrosion phenomena in solving complex unfamiliar problems. • Specify procedures and processes for protection of metals from corrosion in the contemporary environment. 				
Syllabus <i>Theoretical instruction</i> Concept and types of corrosion. Damages and pollutions produced by corrosion in modern society. Principles of corrosion thermodynamics and kinetics. Metal corrosion in the presence of different mechanical effects. Corrosion of inorganic materials. Corrosion of organic materials. Examples and mechanism of complex corrosion processes. Modern methods and experimental techniques for corrosion testing. Corrosion monitoring. <i>Practical instruction</i> Exercises in accordance with the theoretical syllabus.				
Weekly teaching load				Other:
Lectures: 5	Exercises:	Other forms of teaching:	Student research: 5	