Level: bachelor

Course title: CORROSION AND PROTECTION OF MATERIALS, IHA-409

Status: elective

ECTS: 6

Requirements: none

Learning objectives

Students should realize that corrosion is a big and complex problem of today's world. They should be given the necessary theoretical basis of corrosion of metals and the possibilities for protection. They will have developed skills of adjustment and application of standard methodologies and procedures in solving problems related to metal corrosion.

Learning outcomes

After successful completion of this course, students are able to:

- understand and explain fundamental physical and chemical laws on corrosion processes of metals;
- demonstrate the knowledge and understanding of the basic facts, concepts, principles and theories from the field of metal corrosion;
- consult the relevant literature;
- apply knowledge and understanding of corrosion phenomena in solving unfamiliar problems;
- specify procedures and processes for protection of metals from corrosion in the contemporary environment.

Syllabus

Theoretical instruction:

Concept and types of corrosion. Damages and pollutions caused by corrosion processes in modern society. The basic principles of corrosion thermodynamics and kinetics, internal and external factors which influence them. Mechanisms of basic corrosion processes. Modern methods and experimental techniques in the study of corrosion processes. Protection metals of corrosion, the key factors of corrosion and protection of metals.

Practical instruction

Laboratory exercises in accordance with the theoretical syllabus.

Weekly teaching load				Other: /
Lectures: 2 (30)	Exercises: 2 (30)	Other forms of teaching: /	Student research: /	