

Title (Elektrochemia ekologiczna)	Code 1010702321010700725
Field Technologie ochrony środowiska - stacjonarne II stopnia	Year / Semester 1 / 2
Specialty Ecotechnology	Course core
Hours Lectures: 2 Classes: 2 Laboratory: - Projects / seminars: -	Number of credits 6
	Language polish

Lecturer:

prof. dr hab. Jan Skowroński
Instytut Chemii i Elektrochemii Technicznej

Faculty:

Faculty of Chemical Technology
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Status of the course in the study program:

Obligatory.

Assumptions and objectives of the course:

Knowledge of electrochemical methods and processes in terms of environmental protection.

Contents of the course (course description):

The knowledge of electrochemical processes for purification of waste water based on cathodic removal of heavy metals, anodic destruction of organic pollutants and the production of oxidants used for water treatment is provided. Examples of the designs of electrochemical reactors and their performances are given. Techniques used for the pollutant monitoring are considered in parallel. Electrochemical sensors are regarded in terms of both the detection and detoxication of pollutants in water and air. Electrochemical processes and devices, as a route for the generation of electrical energy, are presented concerning chemical properties of active substances used in conventional and advanced cells. Special emphasis is paid to a long-term performance of rechargeable cells as well as to the recycling of spent cells and batteries.

Introductory courses and the required pre-knowledge:

Basic knowledge of physical chemistry.

Courses form and teaching methods:

Lecture

Form and terms of complete the course - requirements and assessment methods:

Written exam (repeated exam - oral).

Basic Bibliography:

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Additional Bibliography:

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