COURSE DESCRIPTION CARD - SYLLABUS

Course name

Seminarium dyplomowe (Diploma seminar)

Course

Field of study

Technologia chemiczna (Chemical Technology)

Year/Semester

II/3

Area of study (specialization)

Elektrochemia techniczna (Technical Electrochemistry)

Profile of study

general academic

Level of study

Second-cycle studies

Course offered in

Polish

Form of study

full-time

Requirements

compulsory

Number of hours

Lecture	Laboratory classes	Other (e.g. online)
Tutorials	Projects/seminars	
	30	

Number of credit points

3

Lecturers

Responsible for the course/lecturer:

PhD, DSc, Eng. Grzegorz Lota, Associate Professor

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Faculty of Chemical Technology

ul. Piotrowo 3, 60-965 Poznan

Responsible for the course/lecturer:

Prerequisites

The students have a knowledge based on theory, covering key issues in the field of technical electrochemistry.

Students can obtain information from literature, databases and other sources related to the chemical sciences, can interpret obtained data, and formulate conclusions and their own opinions.

Student understands the need for further education and improving the personal competences.

Course objective

The aim of the course is enable students to get the knowledge and skills for appropriate preparation

their Master thesis in the field of methodological correctness, suitable edition of the thesis, and the selection and using the bibliography.

Additionally, students can extend the skills associated with preparing, presenting, and participation in technical discussions. The aim of the course is also enable students obtaining a number of social competence related to the profile of graduate degree.

Course-related learning outcomes

Knowledge

1. Has expanded and in-depth knowledge in the field of electrochemistry and other related areas of science, allowing to formulate and solve complex tasks related to electrochemical technology. [K_W2]

2. Has knowledge of complex electrochemical processes, including the appropriate selection of materials, raw materials, methods, techniques, apparatus and equipment for the implementation of electrochemical processes and characterization of the obtained products. [K_W3]

3. Has extended knowledge in the field of kinetics, thermodynamics and surface phenomena of electrochemical processes. [K_W4]

4. Knows modern methods of electrochemical research, necessary to characterize raw materials and products of the chemical, electrochemical and related industries. [K_W7]

5. Has solid knowledge in the field of occupational safety and health. [K_W10]

6. Has well-established and expanded knowledge of the selected specialty. [K_W11]

7. Has extended knowledge of advanced devices and apparatus used in electrochemical technology. [K_W13]

8. Has knowledge of selected issues of modern chemical knowledge as well as aspects of copyright and industrial property. [K_W14]

Skills

1. Has the ability to obtain and critically evaluate information from literature, databases and other sources, and formulate opinions and reports on this basis. [K_U1]

2. Is able to use English in professional contacts. [K_U3]

3. Has the ability to communicate with specialists and non-specialists in the field of electrochemical technology and related fields. [K_U4]

4. Is able to independently determine the directions of further education and implement self-education. [K_U5]

5. Is able to properly formulate and verify hypotheses related to engineering problems in electrochemical technology. [K_U14]

6. Has the ability to assess the technological suitability of raw materials and the selection of the technological process in relation to the product quality requirements. [K_U16]

7. Is able to critically assess the practical usefulness of using new achievements in electrochemical technology. [K_U17]

8. Has the ability to use the knowledge acquired under the specialty course in professional activity. [K_U23]

Social competences

1. Is aware of the need for lifelong learning and professional development. [K_K1]

2. Is aware of the limitations of science and technology related to electrochemical technology, including environmental protection. [K_K2]

3. Professionally recognizes problems and makes the right choices related to the profession, in accordance with the principles of ethics. [K_K3]

4. Adheres to all teamwork rules; is aware of the responsibility for joint ventures and achievements in professional work. [K_K4]

5. Represents a high moral level in relation to social and professional problems. [K_K5]

6. Can think and act in a creative way. [K_K6]

7. Understands the need to provide the public with information on the current state and directions of development of electrochemical technology, on the principles of use and handling of products of electrochemical processes, about the risks associated with the acquisition and distribution of raw materials in the electrochemical industry. [K_K7]

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Completion of the course is based on the prepared presentations of the results and scientific literature connected with diploma thesis, and additionally on the participation of individual students in discussing issues and problems related to the subject of dissertations.

Programme content

1.The opportunities of searching necessary information in the field of diploma thesis, the using the source materials and their presentation in thesis.

2.The structure of the thesis - the most common formal and substantive mistakes.

3. Presentation the results of the engineering thesis.

4. Discussion about appropriate preparation and presentation of obtained results.

5. Open discussion during and after the presentations for improving the quality of the performance and the development the soft skills of the students.

6. Preparation and submission of the thesis.

Teaching methods

1. Supply method (diploma seminar).

Bibliography

Basic

Indicated by the thesis supervisor.

Additional

Indicated by the thesis supervisor.

Breakdown of average student's workload

	Hours	ECTS
Total workload	75	3,0
Classes requiring direct contact with the teacher	40	1,5
Student's own work (literature studies, preparation for seminar classes) [1]	35	1,5

[1] delete or add other activities as appropriate