

<b>STUDY MODULE DESCRIPTION FORM</b>		
Name of the module/subject <b>Diploma Seminar</b>		Code <b>1010702231010700029</b>
Field of study <b>Chemical Technology</b>	Profile of study (general academic, practical) <b>general academic</b>	Year /Semester <b>2 / 3</b>
Elective path/specialty <b>Industrial Electrochemistry</b>	Subject offered in: <b>Polish</b>	Course (compulsory, elective) <b>obligatory</b>
Cycle of study: <b>Second-cycle studies</b>	Form of study (full-time, part-time) <b>full-time</b>	
No. of hours Lecture: - Classes: - Laboratory: - Project/seminars: <b>30</b>		No. of credits <b>3</b>
Status of the course in the study program (Basic, major, other) <b>other</b>		(university-wide, from another field) <b>university-wide</b>
Education areas and fields of science and art <b>technical sciences</b> <b>Technical sciences</b>		ECTS distribution (number and %) <b>3 100%</b> <b>3 100%</b>
<b>Responsible for subject / lecturer:</b>  dr hab. inż. Grzegorz Lota email: grzegorz.lota@put.poznan.pl tel. 61 665 21 58 Faculty of Chemical Technology ul. Berdychowo 4 60-965 Poznań		
<b>Prerequisites in terms of knowledge, skills and social competencies:</b>		
1	<b>Knowledge</b>	The students have a knowledge based on theory, covering key issues in the field of technical electrochemistry.
2	<b>Skills</b>	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.
3	<b>Social competencies</b>	Student understands the need for further education and improving the personal competences.
<b>Assumptions and objectives of the course:</b> 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.		
<b>Study outcomes and reference to the educational results for a field of study</b>		
<b>Knowledge:</b> 1. Student has wide knowledge in the field of the electrochemistry and other related areas of science, allowing on preparation and solving tasks associated with chemical technology - [K_W02] 2. The student has a basic knowledge of chemical processes running with the use of electricity, including their kinetics and selection of materials, methods, techniques, apparatus and equipment for their implementation - [K_W03, K_W04, K_W07, K_W09] 3. The student has a basic knowledge of research methods of the electrode materials properties used in electrochemical systems, ie.: capacitors, fuel cells, electrolyzers, etc - [K_W07] 4. The student has a basic knowledge on selected topics of modern chemical technology and aspects of copyright and industrial property - [K_W14]		
<b>Skills:</b>		

<ol style="list-style-type: none"> <li>1. The student has the ability to obtain and critically evaluate information from literature, databases and other sources and to formulate opinions and reports - [K_U01]</li> <li>2. The student is able to use English in their professional relations. - [K_U03]</li> <li>3. The student has the ability to communicate with specialists in the fields of chemical technology and others - [K_U04]</li> <li>4. The student is able to independently define the direction of further education and self-education - [K_U05]</li> <li>5. The student is able to properly formulate and verify hypotheses related to engineering problems in chemical technology - [K_U14]</li> <li>6. The student has the ability to evaluate the correctness of resources and selected process in relation to the quality requirements of the product - [K_U16]</li> <li>7. The student is able to critically evaluate the practical suitability of new developments in the chemical technology - [K_U16]</li> <li>8. The student has the ability to use the knowledge acquired in the specialty in professional activity - [K_U23]</li> </ol>
<b>Social competencies:</b>
<ol style="list-style-type: none"> <li>1. Student understands the need for further education and improving the personal competences - [K_K01]</li> <li>2. Student has an awareness of the need to protect the environment - [K_K02]</li> <li>3. Student can cooperate and work in a group, taking different roles - [K_K03]</li> <li>4. The student is able to properly identify priorities for implementation of the selected task - [K_K04]</li> <li>5. The student takes choices in accordance with the principles of professional ethics - [K_K05]</li> <li>6. The student is aware of the social role of technical college graduates, especially understands the need for the formulation in a manner commonly understood, information and opinions concerning aspects of engineering - [K_K07]</li> </ol>

<b>Assessment methods of study outcomes</b>		
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.		
<b>Course description</b>		
<ol style="list-style-type: none"> <li>1. The opportunities of searching necessary information in the field of diploma thesis, the using the source materials and their presentation in thesis.</li> <li>2. The structure of the thesis - the most common formal and substantive mistakes.</li> <li>3. Presentation the results of the engineering thesis.</li> <li>4. Discussion about appropriate preparation and presentation of obtained results.</li> <li>5. Open discussion during and after the presentations for improving the quality of the performance and the development the soft skills of the students.</li> <li>6. Preparation and submission of the thesis.</li> </ol>		
<b>Basic bibliography:</b>		
1. Literature indicated by the supervisor of the thesis.		
<b>Additional bibliography:</b>		
1. Literature indicated by the supervisor of the thesis.		
<b>Result of average student's workload</b>		
Activity	Time (working hours)	
1. Seminar	30	
2. Consultation to the seminar.	10	
3. Preparation to the seminar.	15	
<b>Student's workload</b>		
Source of workload	hours	ECTS
Total workload	55	3
Contact hours	40	0
Practical activities	0	0