

<b>STUDY MODULE DESCRIPTION FORM</b>		
Name of the module/subject <b>(-)</b>		Code <b>1010311371010316933</b>
Field of study <b>Electrical Engineering</b>	Profile of study (general academic, practical) <b>(brak)</b>	Year /Semester <b>4 / 7</b>
Elective path/specialty <b>Electric Power Systems</b>	Subject offered in: <b>Polish</b>	Course (compulsory, elective) <b>obligatory</b>
Cycle of study: <b>First-cycle studies</b>	Form of study (full-time, part-time) <b>full-time</b>	
No. of hours Lecture: <b>15</b> Classes: <b>15</b> Laboratory: <b>-</b> Project/seminars: <b>-</b>		No. of credits <b>3</b>
Status of the course in the study program (Basic, major, other) <b>(brak)</b>		(university-wide, from another field) <b>(brak)</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 inż. Justyna Michalak email: justyna.michalak@put.poznan.pl tel. 616652030 Wydział Elektryczny ul. Piotrowo 3A 60-965 Poznań		
<b>Prerequisites in terms of knowledge, skills and social competencies:</b>		
1	<b>Knowledge</b>	Student has a knowledge in the scope of basic definitions concerning power companies and in the scope of basic methods of evaluation of economic effectiveness of power companies
2	<b>Skills</b>	Student is able to evaluate economic effectiveness of power companies and is able to collect data essential to carry out such analysis
3	<b>Social competencies</b>	Student is ready to teamwork and to make a decision
<b>Assumptions and objectives of the course:</b> To acquaint methods of evaluation of economic effectiveness of power investments on the basis of criterion of minimum wastes (criterion of power limit). To acquaint basis of financial management of power companies		
<b>Study outcomes and reference to the educational results for a field of study</b>		
<b>Knowledge:</b>		
1. Has a knowledge in the scope of the basis of financial management of power companies - [K_W20 +K_W22++K_W23 +++++K_W25 +++++, K_W27+++]		
2. Has a knowledge in the scope of basic methods of evaluation of economic effectiveness of power companies on the basis of criterion of minimum wastes (criterion of power limit) - [K_W20++K_W24++ K_W27+++ K_W27+]		
<b>Skills:</b>		
1. Is able to evaluate economic effectiveness of power companies limiting environment pollution - [K_U07+K_U08++K_U16+++K_U16++]		
2. Is able to collect data essential to carry out analysis of economic effectiveness of power companies - [K_U01++, K_U03+, K_U14++, K_U20+++ , K_U20++]		
3. Is able to calculate losses of power and energy - [K_U01++, K_U08+, ]		
<b>Social competencies:</b>		
1. Has a consciousness of economy aspects power company conducting on market. - [K_K02+K_K05+++++]		
<b>Assessment methods of study outcomes</b>		

<p>Classes</p> <p>evaluation of knowledge and competitions by written tests connected with calculation exercises</p> <p>permanent evaluation during every classes (rewarding for activity)</p> <p>evaluation of competence to use acquainted methods and rules</p>		
<b>Course description</b>		
<p>Financial economy of power companies. New power investments, modernization and overhauls in power engineering, evaluation of economic effectiveness. losses of power and energy. Criterion of power limit (criterion of minimum of losses)</p>		
<p><b>Basic bibliography:</b></p> <p>1. Sierpińska M., Jachna T., Ocena przedsiębiorstwa według standardów światowych, Wydawnictwo Naukowe PWN, Warszawa, 2017</p> <p>2. Paska J., Ekonomika w elektroenergetyce, Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa, 2007.</p> <p>3. Laudyn D., Rachunek ekonomiczny w elektroenergetyce, Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa, 2007.</p> <p>4. Bartnik R.: Rachunek efektywności techniczno-ekonomicznej w energetyce zawodowej, Oficyna Wydawnicza Politechniki Opolskiej, Opole 2008.</p> <p>5. Soliński I.: Ekonomika i organizacja sektorów systemu paliwowo-energetycznego, Uczelniane Wydawnictwa Naukowo-Dydaktyczne AGH, Kraków 2000.</p>		
<p><b>Additional bibliography:</b></p> <p>1. Janasz W, Podstawy ekonomii przemysłu, Wydawnictwo Naukowe PWN, Warszawa, 1997.</p> <p>2. Drury C., Rachunek kosztów Wydawnictwo Naukowe PWN, Warszawa, 1996.</p> <p>3. Ustawa z dnia 10 kwietnia 1997 r. PRAWO ENERGETYCZNE z Rozporządzeniami Ministra Gospodarki w sprawie szczegółowych zasad kształtowania i kalkulacji taryf oraz zasad rozliczeń w obrocie energią elektryczną.</p>		
<b>Result of average student's workload</b>		
<b>Activity</b>	<b>Time (working hours)</b>	
1. participation in lectures	15	
2. execution of calculation exercises	15	
3. tutorials related to lectures	10	
4. tutorials related to classes	10	
5. preparation to exam	30	
<b>Student's workload</b>		
<b>Source of workload</b>	<b>hours</b>	<b>ECTS</b>
Total workload	70	3
Contact hours	50	2
Practical activities	0	0