

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject (-)		Code 1010314381010326973
Field of study Power Engineering	Profile of study (general academic, practical) (brak)	Year /Semester 4 / 8
Elective path/specialty Ecological Source of Electrical Energy	Subject offered in: polish	Course (compulsory, elective) obligatory
Cycle of study: First-cycle studies	Form of study (full-time, part-time) part-time	
No. of hours Lecture: 15 Classes: 15 Laboratory: - Project/seminars: -		No. of credits 2
Status of the course in the study program (Basic, major, other) (brak)		(university-wide, from another field) (brak)
Education areas and fields of science and art technical sciences Technical sciences		ECTS distribution (number and %) 2 100% 2 100%
Responsible for subject / lecturer: dr inż. Justyna Michalak email: justyna.michalak@put.poznan.pl tel. 616652030 Wydział Elektryczny ul. Piotrowo 3A 60-965 Poznań		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	Student has a knowledge in the scope of basics definitions concerning power companies and basic methods of evaluation of power company economic effectiveness
2	Skills	Student is able to evaluate economic effectiveness of power companies, and is able to collect data essential to carry out such analysis.
3	Social competencies	Student is ready to work in team and to make a decision
Assumptions and objectives of the course: To acquaint methods of evaluation of economic profitability of power investment based on criteria of minimum losses and criterion of power limit. To acquaint basis of financial management of power companies		
Study outcomes and reference to the educational results for a field of study		
Knowledge:		
1. Has a knowledge in the scope of 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 power company economic effectiveness based on criteria of minimum losses (criterion of power limit) - [K_W20++K_W24++ K_W27+++ K_W27+]		
Skills:		
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 energy and power losses. - [K_U01++, K_U08+,]		
Social competencies:		
1. Has a consciousness of economy aspects of power company conducting on market. - [K_K02+K_K05+++++]		
Assessment methods of study outcomes		

<p>Lecture evaluation of knowledge and competitions by written test permanent evaluation during every classes (rewarding for activity) Classes test, rewarding the knowledge necessary to realize the assigned task permanent evaluation during every classes, rewarding the increase of competition to use acquainted methods and principles, evaluation of knowledge connected with realization of calculation exercises. Additional points for activity during classes</p>		
Course description		
<p>Basic principles of operation of power companies on market. Power law, Financial economy of power companies. New power investments, modernization and refurbishment in power engineering law , technical and economy aspects. Calculation exercises agree with content of the of 2nd and 3rd semester lectures.</p>		
Basic bibliography:		
<ol style="list-style-type: none"> Sierpińska M., Jachna T., Ocena przedsiębiorstwa według standardów światowych, Wydawnictwo Naukowe PWN, Warszawa, 1997. Paska J., Ekonomika w elektroenergetyce, Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa, 2007. Laudyn D., Rachunek ekonomiczny w elektroenergetyce, Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa, 2007. Bartnik R.: Rachunek efektywności techniczno-ekonomicznej w energetyce zawodowej, Oficyna Wydawnicza Politechniki Opolskiej, Opole 2008. Soliński I.: Ekonomika i organizacja sektorów systemu paliwowo-energetycznego, Uczelniane Wydawnictwa Naukowo-Dydaktyczne AGH, Kraków 2000. Góra S., Gospodarka elektroenergetyczna w przemyśle, Państwowe Wydawnictwo Naukowe, Warszawa, 1975. 		
Additional bibliography:		
<ol style="list-style-type: none"> Janasz W, Podstawy ekonomii przemysłu, Wydawnictwo Naukowe PWN, Warszawa, 1997. Drury C., Rachunek kosztów Wydawnictwo Naukowe PWN, Warszawa, 1996. 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. 		
Result of average student's workload		
Activity	Time (working hours)	
1. participation in lectures	15	
2. execution of calculation exercises	15	
3. participation in tutorials related to lectures	5	
4. participation in tutorials related to exercises	5	
5. preparation to exam	20	
Student's workload		
Source of workload	hours	ECTS
Total workload	60	2
Contact hours	40	2
Practical activities	0	0