

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Theory of probability		Code 1010312411010341000
Field of study Power Engineering	Profile of study (general academic, practical) (brak)	Year /Semester 1 / 1
Elective path/specialty -	Subject offered in: Polish	Course (compulsory, elective) obligatory
Cycle of study: Second-cycle studies	Form of study (full-time, part-time) full-time	
No. of hours Lecture: 30 Classes: 15 Laboratory: - Project/seminars: -		No. of credits 4
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		ECTS distribution (number and %) 4 100%
Responsible for subject / lecturer: dr Elżbieta Wieczorek email: elzbieta.wieczorek@put.poznan.pl tel. 61 665 23 49 Elektryczny ul. Piotrowo 3A, 60-965 Poznań		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	Student knows basic notions in calculus, set theory and logic.
2	Skills	Student can operate a calculator, a computer and find and use proposed literature.
3	Social competencies	Student recognizes the necessity in deepening his knowledge. Student is conscious to operate in creative and rational way. Student is active during classes.
Assumptions and objectives of the course: -to acquire basic statistical and probabilistic methods and develop the ability to use these methods to solve practical engineering problems.		
Study outcomes and reference to the educational results for a field of study		
Knowledge:		
1. Student has a basic knowledge of probability theory, including the rights of probability useful to solve practical engineering problems. - [[K_W01 +++]]		
2. Student has a basic knowledge of descriptive and mathematical statistics useful to solve practical engineering problems. - [[K_W01 +++]]		
3. Student knows the basic techniques and tools used to solve simple engineering tasks using information technology and computer support. - [[K_W01 +++]]		
Skills:		
1. Student is able to interpret the information from literature, databases and other selected sources and to draw conclusions and formulate and justify opinions. - [[K_K10 +]]		
2. Student can use information and communication technology for the tasks of typical engineering activities. - [[K_K10 +]]		
3. Student is able to select and apply appropriate methods and tools and to use them effectively to solve tasks of mathematical statistics. - [[K_K10 +]]		
Social competencies:		
1. Student is able to argue the necessity of continuous learning. - [[K_K01 +]]		
2. Student is aware of their responsibility for their own work and is willing to obey the rules of collective work and to take responsibility for collaborative tasks. - [[K_K01 +]]		
3. Student can see cause and effect relationship in achieving the set of goals and rank alternative or competitive tasks. - [[K_K02 +]]		

Assessment methods of study outcomes		
-Forming score: on the basis of written tests and oral answers. Summary score: the average points obtained by the witten tests.		
Course description		
-The basic concepts of probability will be discussed i.e.: probability space, random variables, elements of descriptive statistics, methods od statistical inference - estimation, hypothesis verification.		
Basic bibliography: 1. Krysicki W., Bartos J., Dyczka W., Królikowska K., Wasilewski M., Rachunek prawdopodobieństwa i statystyka matematyczna w zadaniach, cz. I, II. Wydawnictwo PWN, Warszawa 2. Bobrowski D., Łybacka K., Wybrane metody wnioskowania statystycznego. Wydawnictwo Politechniki Poznańskiej, Poznań		
Additional bibliography: 1. Plucińska A., Pluciński E., Probabilistyka, Wydawnictwo WNT, Warszawa 2. Jasiulewicz H., Kordecki W., Rachunek prawdopodobieństwa i statystyka matematyczna. Przykłady i zadania. Oficyna wydawnicza GiS, Wrocław 3. Kordecki W., Rachunek prawdopodobieństwa i statystyka matematyczna. Definicje, twierdzenia, wzory. Oficyna wydawnicza GiS, Wrocław		
Result of average student's workload		
Activity	Time (working hours)	
1. Lectures participation	30	
2. Classes participation	15	
3. Tests and exams preparation	45	
4. Homework preparation	10	
5. Classes preparation	10	
Student's workload		
Source of workload	hours	ECTS
Total workload	110	4
Contact hours	45	2
Practical activities	15	2