

<b>STUDY MODULE DESCRIPTION FORM</b>		
Name of the module/subject <b>Mathematical statistics</b>		Code <b>1011105311011000139</b>
Field of study <b>Engineering Management - Part-time studies -</b>	Profile of study (general academic, practical) <b>(brak)</b>	Year /Semester <b>1 / 1</b>
Elective path/specialty <b>Production and Operations Management</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>part-time</b>	
No. of hours Lecture: <b>10</b> Classes: <b>10</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		ECTS distribution (number and %)
<b>Responsible for subject / lecturer:</b>		
-dr Elzbieta Wieczorek email: -elzbieta.wieczorek@put.poznan.pl tel. --+48(61)6652349 -Wydział Elektryczny Instytut Matematyk -ul. Piotrowo 3a 60-965 Poznań		
<b>Prerequisites in terms of knowledge, skills and social competencies:</b>		
1	<b>Knowledge</b>	Student knows basic notions in set theory, logic and calculus.
2	<b>Skills</b>	Student can operate a calculator, a computer and use proposed literature.
3	<b>Social competencies</b>	Student recognizes the necessity in deepening his knowledge.
<b>Assumptions and objectives of the course:</b>		
to acquire basic statistical methods and develop the ability to use these methods to solve practical engineering problems		
<b>Study outcomes and reference to the educational results for a field of study</b>		
<b>Knowledge:</b>		
1. Student has a basic knowledge of probability theory - [K1A_W04]		
2. Student has a basic knowledge of descriptive and mathematical statistics, useful to solve practical engineering problems. - [K1A_W04]		
<b>Skills:</b>		
1. Student is able to interpret the information from a sample and to draw conclusions - [K1A_U05]		
<b>Social competencies:</b>		
1. Student is able to argue the necessity of continuous learning - [K1A_K01]		
<b>Assessment methods of study outcomes</b>		
-Forming score: on the basis of written tests and oral answers.		
Summary score: the average points obtained by the written tests.		
<b>Course description</b>		
-The basic concepts of probability will be discussed i.e.: probability space, random variables, elements of descriptive statistics, methods of statistical inference - estimation, hypothesis verification and analysis of correlation and regression.		

<b>Basic bibliography:</b>		
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		
<b>Additional bibliography:</b>		
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		
<b>Result of average student's workload</b>		
<b>Activity</b>		<b>Time (working hours)</b>
1. 1.	Lectures participation	10
2. 2.	Classes participation	10
3. 3.	Cunsultaion	2
4. 4.	Classes preparation	10
5. 5.	Test preparation	10
6. 6.	Test	2
7. 7.	Results discussion	2
<b>Student's workload</b>		
<b>Source of workload</b>	<b>hours</b>	<b>ECTS</b>
Total workload	46	3
Contact hours	36	2
Practical activities	10	1