STUDY MODULE DESCRIPTION FORM

Name of the module/subject **Mathematical statistics**		Code **1011105311011000139**

Field of study **Engineering Management - Part-time studies -**	Profile of study (general academic, practical) **(brak)**	Year /Semester **1 / 1**
Elective path/specialty **Quality Systems and Ergonomics**	Subject offered in: **Polish**	Course (compulsory, elective) **obligatory**

Cycle of study: **Second-cycle studies**	Form of study (full-time, part-time) **part-time**

No. of hours				No. of credits **3**
Lecture: **10**	Classes: **10**	Laboratory: **-**	Project/seminars: **-**	

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	ECTS distribution (number and %**)**

Responsible for subject / lecturer:

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Prerequisites in terms of knowledge, skills and social competencies:

1	**Knowledge**	Student knows basic notions in set theory, logic and calculus.
2	**Skills**	Student can operate a calculator, a computer and use proposed literature.
3	**Social competencies**	Student recognizes the necessity in deepening his knowledge.

Assumptions and objectives of the course:

to acquire basic statistical 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 - [K1A_W04]]

2. 2.   Student has a basic knowledge of descriptive and mathematical statistics, useful to solve practical engineering problems. - [K1A_W04]]

Skills:

1. Student is able to interpret the information from a sample and to draw conclusions - [K1A_U05]

Social competencies:

1. Student is able to argue the necessity of continuous learning - [K1A_K01]

Assessment methods of study outcomes

-Forming score:

on the basis of written tests and oral answers.

Summary score:

 the average points obtained by the written tests.

Course description

-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.

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. 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

Student's workload

Source of workload	hours	ECTS
Total workload	46	3
Contact hours	36	2
Practical activities	10	1