STUDY MODULE DESCRIPTION FORM

Name of the module/subject		Code
Statistics		**1011101321010342598**

Field of study	Profile of study (general academic, practical)	Year /Semester
Logistics - Full-time studies - First-cycle studies	**(brak)**	**1 / 2**
Elective path/specialty	Subject offered in:	Course (compulsory, elective)
-	**Polish**	**obligatory**

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

No. of hours				No. of credits
Lecture: **30**	Classes: **15**	Laboratory: **-**	Project/seminars: **-**	**3**

Status of the course in the study program (Basic, major, other)	(university-wide, from another field)
(brak)	**(brak)**

Education areas and fields of science and art	ECTS distribution (number and %)

Responsible for subject / lecturer:

-dr Elżbieta Wieczorek
email: -elzbieta.wieczorek@put.poznan.pl
tel. -+48(61)6652349
-Wydział Elektryczny Instytut Matematyk
-ul. Piotrowo 3a 60-965 Poznań

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.

Teaching methods:

Lecture - informative lecture.

Exercises - exercise method, demonstration method.

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. Consultation	4
4. Test	2
5. Results discussion	2
6. Classes preparation	15
7. Test preparation	15

Student's workload

Source of workload	hours	ECTS
Total workload	83	3
Contact hours	53	2
Practical activities	15	1