

COURSE DESCRIPTION

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| Name of the higher education institution: <i>University of Presov</i> | |
| Name of the faculty/university workplace: <i>Faculty of Management and Business</i> | |
| Course code: 7KFUM/STAT-ER/26 | Course title: <i>Statistics</i> |
| Type, scope and method of educational activity: <i>Type of educational activity: Lecture, Seminar</i> <i>Scope of educational activity: 2, 1 hour per week,</i> <i>Method of educational activity: Combined</i> | |
| Number of credits: 5 | |
| Recommended semester: summer semester | |
| Degree of study: 1. | |
| Prerequisites: --- | |
| Conditions for passing the course: <i>Assessment and completion of the course: Exam</i> <i>Credits will be awarded to the student under the following conditions:</i> <i>- if he actively participates in seminars, and at the same time</i> <i>- if during the semester out written examination of 30 points (written in full-time or online tests, or homework in distance form) obtains a total of at least 15 points, and at the same time</i> <i>- if he / she obtains at least 50 points together (in sum) from continuous written examination (maximum 30 points) and final 70-point written (or online) test.</i> <i>Credits will not be awarded to a student who does not meet all of the above conditions.</i> <i>The overall evaluation is awarded to the student on the basis of the sum of points from the continuous written examination and final written examination, as follows: A 100.00 - 90.00%; B 89.99 - 80.00%; C 79.99 - 70.00%; D 69.99 - 60.00%; E 59.99 - 50.00%; FX 49.99 and less%.</i> <i>Methods of Education: The course employs frontal (lecture-based), group, and individual teaching methods. Students participate in face-to-face classes, work independently with literature, and access up-to-date content via e-learning through the Moodle LMS. They are encouraged to solve problems creatively and independently.</i> <i>Completion of the course is conditioned by successful completion of the set conditions and fulfillment of the conditions of participation according to the Study Regulations of PU in Prešov.</i> | |

Learning outcomes:**Knowledge:**

The graduate of the course knows (within the scope of knowledge given by the brief syllabus of the course), and on the basis of the acquired knowledge can:

- *explain scientific terminology in the field of statistics;*
- *specify methods for calculating statistics;*
- *describe mathematical and statistical operations used in selected analyses (e.g., economic, financial, managerial, etc.)*
- *characterize random processes.*

Skills:

The graduate of the course is able, on the basis of acquired generally valid statistical knowledge of the subject of a defined scope:

- *apply mathematical and statistical operations;*
- *apply statistical principles in management;*
- *apply appropriate qualitative, quantitative and statistical methods of analysis;*
- *evaluate statistical sets;*
- *critically evaluate quantitative information in relation to statistical data processing;*
- *collect, analyze and evaluate information using statistical analysis;*
- *process database files to create statistical analyses;*
- *use spreadsheets;*
- *use statistical software;*
- *estimate the development trend of the monitored indicator;*
- *write a comment and opinion on the data, statistical results and development trends;*
- *evaluate the outputs of statistical analyses and develop professional information output;*
- *process the analysis of the obtained results.*

Competences:

The graduate of the course gains the

- *accuracy and precision when working with data, numbers and various information;*
- *ability to think logically;*
- *ability of systematic and analytical thinking;*
- *ability to critically evaluate information obtained from various sources;*
- *ability to draw conclusions from identified deviations and development trends;*
- *ability of cultivated professional oral and written expression in the field of statistical methods;*
- *consistency and independence in solving work tasks;*
- *responsibility for the performance of his/her tasks and responsibilities;*
- *ability to deliver creative solutions.*

Course content:

1. *Combinatorics.*
2. *Probability Theory.*
3. *Random Variable. Distribution Function.*
4. *Normal Distribution. Standard Normal Distribution.*
5. *Statistics – Basic Terminology. Descriptive Statistic.*

6. Estimation Theory.
7. Inductive Statistics – Basic Terminology.
8. Parametrics Tests.
9. Non-Parametrics Tests.
10. Correlation Analysis. Pearson Correlation Coefficient.
11. Regression Analysis. Linear Regression Model.
12. Rank Correlation. Spearman Rank Correlation Coefficient.
13. Chi-square Test of Independence.

Recommended literature:

BRINK, D., 2010. *Essentials of Statistics*. David Brink and Ventus Publishing. ISBN 978-87-7681-408-3.

LEVIN, J. A., FOX, J. A., FORDE, D. R. 2017. *Elementary Statistics in Social Research – updated 12 th edition*. New York: Pearson. ISBN 978-0-13-442776-8.

SHAFER, D. S., ZHANG, Z., 2014. *Beginning Statistics*. Available at: <https://www.e-booksdirectory.com/details.php?ebook=12097>

Language which is necessary to complete the course: *English*

Notes:

Student workload:

17 % of the workload - participation in education (lectures and seminars),

25 % of the workload - preparation for seminars and continuous test,

58 % of the workload - self-study, preparation for the exam.

An individualized approach is provided for students with special needs based on the recommendation of the faculty coordinator for students with special needs.

Course evaluation

Total number of students evaluated: 9

| A | B | C | D | E | FX |
|-----|-----|-----|----|----|----|
| 56% | 11% | 33% | 0% | 0% | 0% |

Lecturers:

prof. Ing. Dr. Róbert Štefko, Ph.D., guarantor

Mgr. Tomáš Bačinský, PhD., co-guarantor, lecturer, examiner

Date of last change: *September 1st, 2025*

Approved by: *prof. Ing. Dr. Róbert Štefko, Ph.D.*