Subject card

<table>
<tr><td>Subject name and code</td><td colspan="6">Descriptive Statistics, PG_00188072</td></tr>
<tr><td>Field of study</td><td colspan="6">International Business</td></tr>
<tr><td>Date of commencement of studies</td><td colspan="2">October 2026</td><td colspan="2">Academic year of realisation of subject</td><td colspan="2">2026/2027</td></tr>
<tr><td>Education level</td><td colspan="2">Bachelor's studies</td><td colspan="2">Subject group</td><td colspan="2">Obligatory subject group in the field of study
Subject group related to scientific research in the field of study</td></tr>
<tr><td>Mode of study</td><td colspan="2">full-time studies</td><td colspan="2">Mode of delivery</td><td colspan="2">at the university</td></tr>
<tr><td>Year of study</td><td colspan="2">1</td><td colspan="2">Language of instruction</td><td colspan="2">English</td></tr>
<tr><td>Semester of study</td><td colspan="2">2</td><td colspan="2">ECTS credits</td><td colspan="2">5.0</td></tr>
<tr><td>Learning profile</td><td colspan="2">academic</td><td colspan="2">Assessment form</td><td colspan="2">credit</td></tr>
<tr><td>Conducting unit</td><td colspan="6">Department of Statistics -> Faculty of Management -> Rector</td></tr>
<tr><td rowspan="2">Name and surname of lecturer (lecturers)</td><td colspan="2">Subject supervisor</td><td colspan="4">dr hab. Ewa Wycinka, prof. UG</td></tr>
<tr><td colspan="2">Teachers</td><td colspan="4"></td></tr>
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<table>
<tr><td rowspan="3">Lesson types</td><td>Lesson type</td><td>Lecture</td><td>Tutorial</td><td>Laboratory</td><td>Project</td><td>Seminar</td><td>SUM</td></tr>
<tr><td>Number of study hours</td><td>15.0</td><td>30.0</td><td>0.0</td><td>0.0</td><td>0.0</td><td>45</td></tr>
<tr><td colspan="7">E-learning hours included: 0.0</td></tr>
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<tr><td rowspan="2">Learning activity and number of study hours</td><td>Learning activity</td><td>Participation in didactic classes included in study plan</td><td>Participation in consultation hours</td><td>Self-study</td><td>SUM</td></tr>
<tr><td>Number of study hours</td><td>45</td><td>0.0</td><td>80.0</td><td>125</td></tr>
<tr><td>Subject objectives</td><td colspan="5">The aim of the course is to familiarize students with the basic methods and tools of descriptive statistics used in the analysis of economic and business phenomena and to develop their ability to collect, organize, present, and interpret data, as well as to use computer-based tools for statistical analysis and draw conclusions based on the results obtained.</td></tr>
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Learning outcomes

Course outcome	Subject outcome	Method of verification
[IBL3_W03] knows and understands at an advanced level selected research methods and tools, including information technologies and techniques for data collection and analysis used in the study of economic and business phenomena.	The student understands the basic methods and tools of descriptive statistics and their application to the collection, presentation, and analysis of economic and business data.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/report
[IBL3_U03] is able to select appropriate sources of information and analyse and synthesise data in order to solve international business problems under conditions of uncertainty.	The student is able to select data sources, organize and present data, and interpret the results of statistical analyses to describe economic and business phenomena.	[SU4] test/exam - oral or written [SU5] implementation of a problem task
[IBL3_U02] is able to formulate and solve complex problems related to international business by applying quantitative and qualitative research methods used in economics, finance and international business.	The student can apply descriptive statistical methods and tools to analyze data and solve economic and business problems.	[SU2] presentation/project/paper/report [SU5] implementation of a problem task

<table>
<tr><td>Subject contents</td><td>Lectures (15 hours)
1. Basic concepts of statistics, statistical methods, and applications of statistics in economics and business.
2. Fundamental statistical concepts and definitions: population, sample, and characteristics of variables.
3. Statistical surveys and research: classification of studies, research design, statistical surveys, and sampling techniques.
4. Methods of presenting and organizing statistical data.
5. Descriptive statistics: classical and positional measures of central tendency (arithmetic mean, weighted mean, median, mode).
6. Measures of data variability (range, variance, standard deviation, coefficient of variation) and measures of skewness.
7. Correlation analysis: scatter plots, correlation coefficient, limitations, and applications of correlation analysis.
8. Simple linear regression: regression function estimation and limitations of regression analysis.
9. Time series analysis, measures of dynamics, simple and composite indices, and trend functions.
Classes (30 hours)
1. Data processing: summarizing, organizing, and grouping data.
2. Data analysis and presentation using computer-based tools.
3. Construction of statistical tables, cross-tabulations, and graphical presentation of data.
4. Calculation and interpretation of the arithmetic mean, weighted mean, median, and mode.
5. Calculation and interpretation of measures of variability and measures of skewness.
6. Analysis of relationships between variables using the correlation coefficient.
7. Estimation and interpretation of simple linear regression models.
8. Analysis of time series, measures of dynamics, simple and composite indices, and trend functions.
9. Interpretation of statistical analysis results and their application to the description of economic and business phenomena.</td></tr>
<tr><td>Prerequisites
and co-requisites</td><td>Entry requirements

Knowledge of the basic concepts covered in the course Mathematics Applications in Economics and Management.

Course completion requirements
The final course grade may be awarded only after obtaining a passing grade in all forms of classes included in the course (lectures and classes/tutorials). Passing each course component is a necessary condition for successful completion of the course.</td></tr>
<tr><td>Assessment methods
and criteria</td><td><table><tr><td>Subject passing criteria</td><td>Passing threshold</td><td>Percentage of the final grade</td></tr><tr><td>Classes assessment including written tests, individual assignments and group assignments</td><td>51.0%</td><td>50.0%</td></tr><tr><td>Lecture assessment (written test)</td><td>51.0%</td><td>50.0%</td></tr></table></td></tr>
<tr><td>Recommended reading</td><td><table><tr><td>Basic literature</td><td>Statistics for business and economics / Anderson [David R. et al.], Cengage Learning EMEA, 5th edition, cop. 2020.</td></tr><tr><td>Supplementary literature</td><td>Statistics for business and economics / Anderson [David R. et al.], Cengage Learning EMEA, 5th edition, cop. 2020.

Applied business statistics : making better business decision / Ken Black, John Wiley & Sons, cop. 2011.

Complete business statistics / Amir D. Aczel, Jayavel Sounderpandian, McGraw-Hill Higher Education, 2009</td></tr><tr><td>eResources addresses</td><td></td></tr></table></td></tr>
<tr><td>Example issues/
example questions/
tasks being completed</td><td></td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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