



Course title: Statistics

ECTS credit allocation (and other scores): 3,5

Semester: spring

Level of study: all

Branch of science: Social sciences

Language: English

Number of hours per semester: 45

Course coordinator/ Department and e-mail: Anna Rutkowska-Ziarko, aniarek@uwm.edu.pl

Type of classes: classes and lectures

Substantive content

CLASSES:

Types of data: Quantitative data and Qualitative data. Scales of measurement: nominal, ordinal, interval, ratio. Descriptive statistics and mathematical statistics. Descriptive statistics methods. Basic parameters of district distribution: mean, median and quartiles, mode, variance, standard deviation, asymmetry, and kurtosis. Discrete random variable, continuous random variable. Probability distribution and cumulative probability distribution. Moments of distributions. Binomial distribution, Poisson distribution. Basic continuous distributions and their properties. Point and interval estimates.

LECTURES:

Why Statistics is Important to Managers. Types of data: Quantitative data and Qualitative data. Scales of measurement: nominal, ordinal, interval, ratio. Descriptive statistics and mathematical statistics. Descriptive statistics methods. Basic parameters of district distribution: mean, median and quartiles, mode, variance, standard deviation, asymmetry, and kurtosis. Discrete random variable, continuous random variable. Probability distribution and cumulative probability distribution. Moments of distributions. Binomial distribution, Poisson distribution. Basic continuous distributions and their properties. Point and interval estimates.

Learning purpose: How to use statistics methods to produce useful information to managers?

On completion of the study programme the graduate will gain:

Knowledge: Basic discrete and continuous distributions and their properties

Skills: Application of statistics methods to produce useful information for decision-making

Social Competencies: Applications of statistics methods in the private life and business activity

Basic literature: Aczel A., A., *Complete Business Statistics*, every edition

Supplementary literature: Hanke J., E., Reitsch A., G., (1991) *Understanding business statistics*. Printed in United States of America.

The allocated number of ECTS points consists of: 3,5

1) Contact hours with an academic teacher:45

2) Student's independent work: 30