Level: Undergraduate Vocational Studies in Optometry	

Course title: Probability and Statistics

Status: elective

ECTS: 6

Requirements: Mathematics

Learning objectives

Students acquire the knowledge of probability and statistics necessary for following the lectures and acquiring the knowledge from the subjects demanding such knowledge.

Learning outcomes

After taking this course and acquiring the knowledge related to the subject, students should possess the general capabilities of analysis and synthesis, as well as subject-specific capabilities of being able to understand the subjects in the study program demanding knowledge of corresponding fields of probability and statistics.

Syllabus

Theoretical instruction

Experiments with random outcomes, random events. Random variables, discrete and continuous. Functions of random variables. Multiple random variables. Mathematical expectation, dispersion, coefficient off correlation. Moments of random variable, median, modus. Laws of large numbers. Central limit theorem. Statistics, basic notions. Distributions which are used in statistics. Estimation. Maximum likelihood method, method of moments. Confidence intervals. Hypothesis testing. Nonparametric tests.

Practical instruction

Weekly teaching load				Other:
Lectures: 3	Exercises: 2	Other forms of teaching:	Student research:	