Subject:	**PROCESSING AND INTERPRETATION OF MEASURED DATA IN CLINICAL PRACTICE**		
Field of study:	*General Medicine*	**Degree of study:**	*III.*
Study programme:	*Clinical Biochemistry*	**Form of study:**	*Internal / External*
Subject evaluation:	*Exam*	**Subject type:**	*Compulsory optional*

Department: **Department of Medical and Clinical Biochemistry UPJŠ FM**

Lectures and seminars

LABORATORY EXAMINATIONS
- Optimization of laboratory work
- Analytical and pre-analytical phase of clinical-biochemical examinations
- Interpretation of laboratory results
- Basic concepts – stages of statistical work

STATISTICAL ANALYSIS
- Medical research – methodology
- Research intent and experimental design
- Quantitative and qualitative changes – hypothesis
- Basic statistical concepts – statistical file, scope, data
- Descriptive and inductive statistics

DESCRIPTIVE STATISTICAL ANALYSIS
- Purpose, basic set (population), parameter
- Selection from the population
- Variables – types of variables (categorical, continuous, dependent, independent ...)
- Type of functional dependence of variables – discrete continuous

MEANS OF EXPRESSION OF STATISTICS
- Graphs – types
- Tables – options
- Random variables in biology – probability distribution
- Arithmetic mean, average, median, mode ...

STATISTICAL EVALUATION AND DATA PROCESSING
- Measures of variability (variance, standard deviation, variation range, interquartile range ...)
- Accuracy and precision
- Analysis errors – random, system
- Errors in hypothesis testing – reference intervals

STATISTICAL TESTING
- Hypothesis – null, alternative ...
- Tests – parametric, nonparametric, one-sample, two-sample ...
- Statistical significance – significance

CLINICAL EFFICIENCY OF THE DIAGNOSTIC TEST
- Sensitivity, specificity
- Predictive value
- Inductive statistical analysis – analysis of variance

STATISTICAL TESTING
- Student's t-test
- Correlation coefficients – Pearson, Spearman…
- ROC/AUC curves