



Course Regime

Course: Basics of biostatistics

Study Programme: Medicine, Dental Medicine

Year of the Course: 2

Semester: Summer

Course type: Compulsory

Number of ECTS credits: 4

Lecturer(s): prof. dr. Janez Stare

Participating Organisational Units: Department of Biostatistics and Medical Informatics

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1. Course objectives

Learn the purpose and types of statistical methods; understand the basics of statistical inference; be able to properly display large amounts of data and results of statistical analyses; be able to properly interpret the results of statistical analyses; be able to plan the collection of empirical data and choose appropriate methods of statistical analysis for them; be able to understand and critically evaluate the statistical analyses described in the technical and scientific literature.

2. Comprehensive outline of the course organisation

Lectures: Wednesdays, 12-14h, Medical Faculty, Korytkova 2

Labs: 9 labs (2,5 full hour each), computer lab IBMI, Vrazov trg 2

Labs are conducted in groups of students – known at the start of semester

Labs are compulsory and a prerequisite for the written exam

Students presenting a valid excuse may be present at another scheduled lab session. If that is impossible, the lab exercise must be performed individually and presented at the next session.

3. Description of on-going assessment of knowledge and skills

Testing readiness for a lab session: each student must respond to preliminary questions for each lab session (basic lecture contents), the basic understanding of the topics is assessed with a brief conversation at the beginning of each lab session. Readiness is a prerequisite to be present at the lab session. A very good understanding and good performance at the lab session may be awarded with extra points

Overview lab sessions: three out of nine lab sessions are organized as individual student work under lab assistant supervision. A completed project is a prerequisite for the exam, the best projects may be rewarded with extra points.

The maximum number of extra points is 12 (percents at the exam). Extra points are valid only in the school year 2018-19.

4. Required conditions for the final examination (Course Exam)

All 9 lab sessions must be completed (see rules above) in order to be allowed to write the exam.

5. Final assessment and examination of knowledge and skills (Course Exam)

The exam is a combination of multiple choice questions and open questions. No negative points may be given. The exam lasts for 45 minutes.

Exam criterium:

insufficient (1-5)	0,00 % to 59,99 %,
sufficient (6)	60,00 % to 67,99 %,
good (7)	68,00 % to 75,99 %,
very good (8)	76,00 % to 83,99 %,
very good (9)	84,00 % to 91,99 %,
excellent (10)	92,00 % to 100 %.

Information: IBMI, Vrazov trg 2, (01) 543 77 70, e-mail: ibmi@mf.uni-lj.si

6. Other provisions

The following items are allowed during the exam: 1 A4 paper with formulae (no worked out examples are allowed), calculator (no mobile phones), statistical tables

Exam topics:

- Basic concepts of probability and statistics.
- Probability distributions: Binomial and Normal distributions.
- Principles and methods of data presentation: graphical presentations, measures of central tendency, measures of variability
- Diagnostic tests: conditional probability, law of total probability, specificity, sensibility. positive and negative predictive value,
- Introduction to parameter estimation and statistical hypothesis testing.
- Confidence intervals.
- Univariate analysis of numeric variables.
- Univariate analysis of categorical variables.
- Linear regression and correlation.
- Nonparametric statistical methods.
- Design of experiments and introduction to the analysis of variance.
- Introduction to survival analysis.